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                   Derwent World Patents Index files
 NEWS  5  Oct 27   Patent Assignee Code Dictionary now available
                   in Derwent Patent Files
 NEWS  6  Oct 27   Plasdoc Key Serials Dictionary and Echoing added to
                   Derwent Subscriber Files WPIDS and WPIX
 NEWS  7  Nov 29   Derwent announces further increase in updates for DWPI
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=> file agricola

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FULL ESTIMATED COST	4.39	4.69

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=> s phopholipase B

            1 PHOPHOLIPASE
        45654 B
L1          0 PHOPHOLIPASE B
                (PHOPHOLIPASE(W)B)

=> s phospholipase B

         1157 PHOSPHOLIPASE
          157 PHOSPHOLIPASES
         1247 PHOSPHOLIPASE
                (PHOSPHOLIPASE OR PHOSPHOLIPASES)
        45654 B
L2         44 PHOSPHOLIPASE B
                (PHOSPHOLIPASE(W)B)

=> d ibib abs l2 1-44


L2   ANSWER 1 OF 44  AGRICOLA
ACCESSION NUMBER:        2000:42421  AGRICOLA
DOCUMENT NUMBER:         IND22050579
TITLE:                   Spo1, a phospholipase B homolog,
                         is required for spindle pole body duplication during
                         meiosis in Saccharomyces cerevisiae.
AUTHOR(S):               Tevzadze, G.G.; Swift, H.; Esposito, R.E.
CORPORATE SOURCE:        University of Chicago, IL.
AVAILABILITY:            DNAL (442.8 C46)
SOURCE:                  Chromosoma, Apr 2000. Vol. 109, No. 1/2. p. 72-85
                         Publisher: Berlin ; New York : Springer-Verlag,
                         CODEN: CHROAU; ISSN: 0009-5915
NOTE:                    Includes references
PUB. COUNTRY:            Germany
DOCUMENT TYPE:           Article
FILE SEGMENT:            Non-U.S. Imprint other than FAO
LANGUAGE:                English

L2   ANSWER 2 OF 44  AGRICOLA
ACCESSION NUMBER:        2000:26096  AGRICOLA
DOCUMENT NUMBER:         IND22037118
TITLE:                   Characterization and function in vivo of two novel
                       phospholipases B/lysophospholipases
                         from Saccharomyces cerevisiae.
AUTHOR(S):               Merkel, O.; Fido, M.; Mayr, J.A.; Pruger, H.; Raab,
                         F.; Zandonella, G.; Kohlwein, S.D.; Paltauf, F.
CORPORATE SOURCE:        Technische Universitat Graz, Graz, Austria.
AVAILABILITY:            DNAL (381 J824)
SOURCE:                  The Journal of biological chemistry, Oct 1, 1999.
Vol.
                         274, No. 40. p. 28121-28127
                         Publisher: Bethesda, Md. : American Society for
                         Biochemistry and Molecular Biology.
                         CODEN: JBCHA3; ISSN: 0021-9258
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NOTE: Includes references
PUB. COUNTRY: Maryland; United States
DOCUMENT TYPE: Article
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English

L2 ANSWER 3 OF 44 AGRICOLA
ACCESSION NUMBER: 1998:39667 AGRICOLA
DOCUMENT NUMBER: IND21075599
TITLE: Identification of functional domains of rat intestinal **phospholipase B**/Lipase. Its cDNA cloning, expression, and tissue distribution.
AUTHOR(S): Takemori, H.; Zolotaryov, F.N.; Ting, L.; Urbain, T.; Komatsubara, T.; Hatano, O.; Okamoto, M.; Tojo, H.
AVAILABILITY: DNAL (381 J824)
SOURCE: The Journal of biological chemistry, Jan 23, 1998. Vol. 273, No. 4. p. 2222-2231
Publisher: Bethesda, Md. : American Society for Biochemistry and Molecular Biology.
CODEN: JBCHA3; ISSN: 0021-9258
NOTE: Includes references
PUB. COUNTRY: Maryland; United States
DOCUMENT TYPE: Article
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English

L2 ANSWER 4 OF 44 AGRICOLA
ACCESSION NUMBER: 1998:39665 AGRICOLA
DOCUMENT NUMBER: IND21075597
TITLE: Purification and characterization of a catalytic domain of rat intestinal **phospholipase B**/Lipase associated with brush border membranes.
AUTHOR(S): Tojo, H.; Ichida, T.; Okamoto, M.
AVAILABILITY: DNAL (381 J824)
SOURCE: The Journal of biological chemistry, Jan 23, 1998. Vol. 273, No. 4. p. 2214-2221
Publisher: Bethesda, Md. : American Society for Biochemistry and Molecular Biology.
CODEN: JBCHA3; ISSN: 0021-9258
NOTE: Includes references
PUB. COUNTRY: Maryland; United States
DOCUMENT TYPE: Article
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English

L2 ANSWER 5 OF 44 AGRICOLA
ACCESSION NUMBER: 1998:21425 AGRICOLA
DOCUMENT NUMBER: IND20623923
TITLE: The Saccharomyces cerevisiae PLB1 gene encodes a protein required for lysophospholipase and **phospholipase B** activity.
AUTHOR(S): Lee, K.S.; Patton, J.L.; Fido, M.; Hines, L.K.; Kohlwein, S.D.; Paltauf, F.; Henry, S.A.; Levin, D.E.
CORPORATE SOURCE: Johns Hopkins University, School of Public Health, Baltimore, MD.
AVAILABILITY: DNAL (381 J824)
SOURCE: The Journal of biological chemistry, Aug 5, 1994. Vol.
269, No. 31. p. 19725-19739
Publisher: Bethesda, Md. : American Society for Biochemistry and Molecular Biology.
CODEN: JBCHA3; ISSN: 0021-9258
NOTE: Includes references
PUB. COUNTRY: Maryland; United States

DOCUMENT TYPE: Article
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English

L2 ANSWER 6 OF 44 AGRICOLA
ACCESSION NUMBER: 1998:19656 AGRICOLA
DOCUMENT NUMBER: IND20622033
TITLE: Some enzymic activities of two Australian ant venoms: a jumper ant Myrmecia pilosula and a bulldog ant Myrmecia pyriformis.
AUTHOR(S): Matuszek, M.A.; Hodgson, W.C.; King, R.G.; Sutherland, S.K.
CORPORATE SOURCE: Monash University, Clayton, Victoria, Australia.
SOURCE: Toxicon, Dec 1994. Vol. 32, No. 12. p. 1543-1549
Publisher: Oxford : Elsevier Science Ltd.
CODEN: TOXIA6; ISSN: 0041-0101
NOTE: Includes references
PUB. COUNTRY: England; United Kingdom
DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English
AB Venoms from two related Australian ants, a jumper ant (Myrmecia pilosula) and a bulldog ant (Myrmecia pyriformis), were quantitatively analysed for the following enzymic activities: phospholipase A2, **phospholipase B**, phospholipase C, hyaluronidase, esterase, acid phosphatase, alkaline phosphatase and phosphodiesterase. Both venoms contained phospholipase A2, **phospholipase B**, hyaluronidase, acid phosphatase and alkaline phosphatase activities. Myrmecia pyriformis venom had significantly greater **phospholipase B**, acid phosphatase and alkaline phosphatase activities than Myrmecia pilosula venom. No detectable quantities of phospholipase C, esterase or phosphodiesterase activities were found in either venom.

L2 ANSWER 7 OF 44 AGRICOLA
ACCESSION NUMBER: 97:39942 AGRICOLA
DOCUMENT NUMBER: IND20569405
TITLE: Disruption of **phospholipase B** gene, PLB1, increases the survival of baker's yeast Torulaspora delbrueckii.
AUTHOR(S): Watanabe, Y.; Imai, K.; Oishi, H.; Tamai, Y.
CORPORATE SOURCE: Ehime University, Ehime, Japan.
AVAILABILITY: DNAL (QR1.F44)
SOURCE: FEMS microbiology letters, Dec 15, 1996. Vol. 145, No. 3. p. 415-420
Publisher: Amsterdam, The Netherlands : Elsevier Science B.V.
CODEN: FMLED7; ISSN: 0378-1097
NOTE: Includes references
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English
AB An uracil auxotrophic mutant of baker's yeast Torulaspora delbrueckii, which is resistant to 5-fluoro-orotic acid, was complemented by transformation with YEp24 which harbors 2 micrometers origin and URA3 derived from Saccharomyces cerevisiae. The **phospholipase B** in T. delbrueckii cells is active in both acidic and alkaline conditions. However, activity of **phospholipase B** gene (PLB1) in cells of disruption mutant (plb1::URA3) was lost in both conditions, which indicates that all **phospholipase B** activity is encoded by a single gene (or a single polypeptide) in these yeast cells. Over-expression of PLB1 with YEp plasmid vector in T. delbrueckii cells showed approximately 2.5-fold increase in

phospholipase B activity, comparing with that in wild-type cells. Cells of plb1 delta mutant showed increased survival when cells of plb1 delta mutant and wild-type strain were incubated in water at 30 degrees C. Cells of PLB1-over-expressed strain died rapidly even during the cultivation period, indicating that **phospholipase B** activity may be a determinant for the survival of this yeast.

L2 ANSWER 8 OF 44 AGRICOLA
ACCESSION NUMBER: 97:18090 AGRICOLA
DOCUMENT NUMBER: IND20551307
TITLE: The SPO1 gene product required for meiosis in yeast has a high similarity to **phospholipase B** enzymes.
AUTHOR(S): Tevzadze, G.G.; Mushegian, A.R.; Esposito, R.E.
CORPORATE SOURCE: University of Chicago, Chicago, IL.
SOURCE: Gene, Oct 24, 1996. Vol. 177, No. 1/2. p. 253-255
Publisher: Amsterdam : Elsevier Science.
CODEN: GENED6; ISSN: 0378-1119
NOTE: Includes references
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English
AB The SPO1 gene of Saccharomyces cerevisiae has been cloned and sequenced. The Spo1 protein reveals significant similarity with fungal **phospholipase B** (PLB) enzymes. Features of the SPO1 gene sequence are presented.

L2 ANSWER 9 OF 44 AGRICOLA
ACCESSION NUMBER: 96:27596 AGRICOLA
DOCUMENT NUMBER: IND20510647
TITLE: Synergistic interaction between cell wall degrading enzymes and membrane affecting compounds.
AUTHOR(S): Lorito, M.; Woo, S.L.; D'Ambrosio, M.; Harman, G.E.; Hayes, C.K.; Kubicek, C.P.; Scala, F.
CORPORATE SOURCE: Universita degli Studi di Napoli, Napoli, Italy.
AVAILABILITY: DNAL (SB732.6.M65)
SOURCE: Molecular plant-microbe interactions : MPMI, Apr 1996.
Vol. 9, No. 3. p. 206-213
Publisher: St. Paul, MN : APS Press, [c1987-
CODEN: MPMIEL; ISSN: 0894-0282
NOTE: Includes references
PUB. COUNTRY: Minnesota; United States
DOCUMENT TYPE: Article
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English
AB A number of cell wall degrading enzymes (CWDEs) and cell membrane affecting compounds (MACs) that alter cell membrane structure or permeability have been assayed in vitro against phytopathogenic fungi and bacteria. Osmotin, gramicidin, valinomycin, **phospholipase B**, trichorzianine A1, trichorzianine B1, gliotoxin, flusilazole, and miconazole were tested in combination with three endochitinases, four exochitinases, and one glucan 1,3-beta-glucosidase from fungi, bacteria, or plants. Every combination of MAC + CWDE showed a high level of inhibition against Botrytis cinerea and Fusarium oxysporum and the interaction between the two kinds of compounds was of a synergistic nature. Different levels of synergism were obtained among the compound combinations depending upon the antifungal activity of the enzyme. When the enzyme treatment was applied subsequent to the MAC, the level of synergism was lower, indicating that degradation of the cell wall is needed to establish the synergistic interaction. The synergism with MACs was also present when the fungal cell wall was altered in a non-enzymatic

manner by including L-sorbose in the growth media. The sensitivity of bacterial strains to the two trichorzianines depended upon the nature of their cell wall and could be synergistically enhanced by partial digestion of the wall. Some of the combinations showed a high level of synergism, suggesting that the interaction between MACs and CWDEs could be involved in biocontrol processes and plant self-defense mechanisms.

L2 ANSWER 10 OF 44 AGRICOLA
ACCESSION NUMBER: 95:41926 AGRICOLA
DOCUMENT NUMBER: IND20466612
TITLE: Purification and properties of lysophospholipase isoenzymes from pig gastric mucosa.
AUTHOR(S): Sunaga, H.; Sugimoto, H.; Nagamachi, Y.; Yamashita, S.
CORPORATE SOURCE: Gunma University School of Medicine, Maebashi, Japan.
AVAILABILITY: DNAL (QP501.B64)
SOURCE: The Biochemical journal, June 1, 1995. Vol. 308, No. pt.2. p. 551-557
Publisher: Colchester, U.K. : Portland Press Ltd.
CODEN: BIJOAK; ISSN: 0264-6021
NOTE: Includes references
PUB. COUNTRY: England; United Kingdom
DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English
AB Two lysophospholipases, named gastric lysophospholipases I and II (enzymes I and II), were purified 3730- and 2680-fold from pig gastric mucosa. The preparations showed 22 and 23 kDa single protein bands on SDS/PAGE respectively. Both enzymes lacked transacylase activity and appeared to exist as monomers. Their activities were not affected by Ca2+, Mg2+ or EDTA. Enzyme I was most active at pH 8.5 and hydrolysed a variety of lysophospholipids including acidic lysophospholipids and the acyl analogue of platelet-activating factor, whereas enzyme II was most active at pH 8 and its activity was confined to lysophosphatidylcholine and lysophosphatidylethanolamine. When 1-palmitoylglycerophosphocholine was used as substrate, enzymes I and II showed half-maximal activities at 11 and 12 micromolar respectively. The enzymes exhibited no **phospholipase B**, lipase or general esterase activity. Enzyme II was significantly inhibited by lysophosphatidic acid whereas enzyme I was only moderately inhibited. Peptide mapping with V8 protease and papain revealed structural dissimilarity between the two enzymes. Antiserum raised against enzyme I did not recognize enzyme II, but did recognize the small-sized lysophospholipase purified from rat liver. Anti-(enzyme II) consistently did not cross-react with enzyme I or the liver enzyme. These antisera specifically recognized neither the 60 kDa lysophospholipase transacylase purified from liver nor any peritoneal macrophage protein. Thus gastric mucosa contains two different small-sized lysophospholipases: one is closely related to the small-sized lysophospholipase of liver, but the other appears to be a novel isoform.

L2 ANSWER 11 OF 44 AGRICOLA
ACCESSION NUMBER: 95:6557 AGRICOLA
DOCUMENT NUMBER: IND20440162
TITLE: Saccharomyces cerevisiae contains four fatty acid activation (FAA) genes: an assessment of their role in regulating protein N-myristoylation and cellular lipid metabolism.
AUTHOR(S): Johnson, D.R.; Knoll, L.J.; Levin, D.E.; Gordon, J.I.
CORPORATE SOURCE: Washington University School of Medicine, St. Louis, MO

AVAILABILITY: DNAL (442.8 J828)
SOURCE: The Journal of cell biology, Nov 1994. Vol. 127, No. 3. p. 751-762
Publisher: New York : Rockefeller University Press, 1962-
CODEN: JCLBA3; ISSN: 0021-9525
NOTE: Includes references
PUB. COUNTRY: New York (State); United States
DOCUMENT TYPE: Article
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English

AB Saccharomyces cerevisiae has been used as a model for studying the regulation of protein N-myristoylation. MyristoylCoA:protein N-myristoyl-transferase (Nmt1p), is essential for vegetative growth and uses myristoylCoA as its substrate. MyristoylCoA is produced by the fatty acid synthetase (Fas) complex and by cellular acylCoA synthetases. We have recently isolated three unlinked Fatty Acid Activation (FAA) genes encoding long chain acylCoA synthetases and have now recovered a fourth by genetic complementation. When Fas is active and NMT1 cells are grown on media containing a fermentable carbon source, none of the FAA genes is required for vegetative growth. When Fas is inactived by a specific inhibitor (cerulenin), NMT1 cells are not viable unless the media is supplemented with long chain fatty acids. Supplementation of cellular myristoylCoA pools through activation of imported myristate (C14:0) is predominantly a function of Faa1p, although Faa4p contributes to this process. Cells with nmt181p need larger pools of myristoylCoA because of the mutant enzymes reduced affinity for this substrate. Faa1p and Faa4p are required for maintaining the viability of nmr1-181 strains even when Fas is active. Overexpression of Faa2p can rescue nmt1-181 cells due to activation of an endogenous pool of C14:0. This pool appears to be derived in part from membrane phospholipids since overexpression of Plb1p, a nonessential lysophospholipase/ **phospholipase B**, suppresses the temperature-sensitive growth arrest and C14:0 auxotrophy produced by nmt1-181. None of the four known FAAs is exclusively responsible for targeting imported fatty acids to peroxisomal beta-oxidation pathways. Introduction of a peroxisomal assembly mutation, pas1 delta, into isogenic NMT1 and nmt1-181 strains with wild type FAA alleles revealed that when Fas is inhibited, peroxisomes contribute to myristoylCoA pools used by Nmt1p. When Fas is active, a fraction of cellular myristoylCoA is targeted to peroxisomes. A NMT1 strain with deletions of all four FAAs is still viable at 30 degrees C on media containing myristate, palmitate, or oleate as the sole carbon source--indicating that S. cerevisiae contains at least one other FAA which directs fatty acids to beta-oxidation pathways.

L2 ANSWER 12 OF 44 AGRICOLA
ACCESSION NUMBER: 95:1458 AGRICOLA
DOCUMENT NUMBER: IND20435996
TITLE: Cloning and sequencing of **phospholipase B** gene from the yeast Torulaspora delbrueckii.
AUTHOR(S): Watanabe, Y.; Yashiki, Y.; Sultana, G.N.N.; Maruyama, M.; Kangawa, K.; Tamai, Y.
CORPORATE SOURCE: Ehime University, Ehime, Japan.
AVAILABILITY: DNAL (QR1.F44)
SOURCE: FEMS microbiology letters, Nov 15, 1994. Vol. 124, No. 1. p. 29-34
Publisher: Amsterdam, The Netherlands : Elsevier Science Publishers.
CODEN: FMLED7; ISSN: 0378-1097
NOTE: Includes references
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Article

FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English
AB The extracellular **phospholipase B** gene from baker's yeast Torulaspora delbrueckii was cloned and sequenced. Analysis of DNA sequence data revealed an open reading frame (ORF) encoding a 649-amino acid protein, that included amino acid sequences obtained from the purified enzyme. Comparison of these sequence data with the N-terminal amino acid sequence of the enzyme indicated that this secreted protein is synthesized as a large precursor with a 21-amino acid N-terminal extension to the mature enzyme of 628 amino acids. A homology search was carried out between **phospholipase B** from T. delbrueckii and Penicillium notatum. The deduced amino acid sequence of the cloned **phospholipase B** was homologous (about 50% identity) to **phospholipase B** from P notatum, and contained six conserved regions. The transcriptional level of the **phospholipase B** gene in different growth phases of the cells was investigated by Northern blot analysis. The level of mRNA of the **phospholipase B** gene was higher in the cells from early exponential and stationary phases.

L2 ANSWER 13 OF 44 AGRICOLA
ACCESSION NUMBER: 94:80652 AGRICOLA
DOCUMENT NUMBER: IND20427236
TITLE: Asparagine-linked carbohydrate of Penicillium notatum **phospholipase B**.
AUTHOR(S): Fujii, S.; Unezaki, S.; Okumura, T.; Miura, R.; Saito, K.
AVAILABILITY: DNAL (385 J822)
SOURCE: The Journal of biochemistry, July 1994. Vol. 116, No. 1. p. 204-208
Publisher: Tokyo : Japanese Biochemical Society.
CODEN: JOBIAO; ISSN: 0021-924X
NOTE: Includes references
PUB. COUNTRY: Japan
DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English
AB The asparagine-linked sugar chains of **phospholipase B** from Penicillium notatum were released by hydrazinolysis. The carbohydrate components were re-N-acetylated and then reductively aminated with 2-aminopyridine. The pyridyl-aminated derivatives were analyzed by size-fractionation and reverse-phase HPLC. The results indicated that the enzyme contains only one kind of oligosaccharide. The carbohydrate was purified by HPLC, and then subjected to NMR and MS analyses for determination of its structure. Based on the results, the structure was determined to be as follows (...).

L2 ANSWER 14 OF 44 AGRICOLA
ACCESSION NUMBER: 93:76573 AGRICOLA
DOCUMENT NUMBER: IND93050716
TITLE: Suppression of **phospholipase B** activity by its carbohydrate moiety.
AUTHOR(S): Yashiki, Y.; Tsuda, S.; Maruyama, M.; Watanabe, Y.; Tamai, Y.
AVAILABILITY: DNAL (QD415.A1J63)
SOURCE: Biotechnology and applied biochemistry, Dec 1992. Vol. 16, No. 3. p. 287-295
Publisher: London : Portland Press Ltd.
CODEN: JABIDV; ISSN: 0885-4513
NOTE: Includes references.
DOCUMENT TYPE: Article

FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English
AB Reaction progress curves for the hydrolysis of mixed micelles of phosphatidylcholine with Triton X-100 were studied with native and carbohydrate-depleted **phospholipase B**. The native **phospholipase B** required a time lag for hydrolysis of substrate, while carbohydrate-depleted enzyme had a markedly reduced lag and its specific activity increased greatly. The addition of **phospholipase B** inhibitor to the reaction mixture with native enzyme prolonged the time lag markedly and decreased the enzymatic activity. The results suggest that the carbohydrate chain in **phospholipase B** may function in yeast cells to regulate its enzymatic activity by masking the interface recognition site of the enzyme molecule. The inhibitor bound micelles of phosphatidylcholine, suggesting that it may interfere with the formation of the enzyme-substrate complex by binding directly to substrate phosphatidylcholine. Yeast cells were digested with zymolyase and fractionated into various subcellular fractions to locate the inhibitor. Inhibitory activity was detected in many fractions. It is suggested that the inhibitor in vivo may contribute to the stabilization of the membrane architecture by associating with membrane phospholipids in their degradation by membrane-bound and water-soluble **phospholipase B**.

L2 ANSWER 15 OF 44 AGRICOLA
ACCESSION NUMBER: 93:10725 AGRICOLA
DOCUMENT NUMBER: IND93000202
TITLE: Orthophosphate, pyrophosphate, and some polyphosphates are specific inhibitors of **phospholipase B** from Torulaspora delbrueckii.
AUTHOR(S): Tsujimoto, T.; Maruyama, M.; Yashiki, Y.; Watanabe, Y.; Tamai, Y.
CORPORATE SOURCE: Ehime University, Matsuyama, Ehime, Japan
AVAILABILITY: DNAL (QD415.A1J63)
SOURCE: Biotechnology and applied biochemistry, Aug 1992. Vol. 16, No. 1. p. 86-96
Publisher: Orlando, Fla. : Academic Press.
CODEN: JABIDV; ISSN: 0885-4513
NOTE: Includes references.
DOCUMENT TYPE: Article
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English
AB We previously purified **phospholipase B** inhibitor from the autolyzate of the yeast Torulaspora delbrueckii. In this work, the chemical structure of the purified inhibitor was analyzed by X-ray microanalysis, elementary analysis, and 31P NMR spectroscopy. The purified inhibitor was identified as the sodium salt of orthophosphate. Structural requirements of inorganic polyphosphates as specific inhibitors for **phospholipase B** were investigated using orthophosphate, pyrophosphate, tripolyphosphate, trimethaphosphate, and polyphosphate. All the inorganic phosphate compounds tested possessed inhibitory activity except tripolyphosphate, although the degree of inhibition depended on the concentration of the compounds in the reaction medium. Calcium ion was required for the inhibitory activity, while NaCl reduced it. This suggested that the inhibitor is bound to a substrate or enzyme-substrate complex by electrostatic or hydrogen bonding. Acid-soluble polyphosphates were extracted from fresh yeast cells and isolated with Dowex 1 X 2. The 0.5 and 0.7 M KCl eluates showed strong inhibitory activity, suggesting that polyphosphates with low molecular weight might be involved in the regulation of the enzyme activity in vivo.

L2 ANSWER 16 OF 44 AGRICOLA
ACCESSION NUMBER: 92:54990 AGRICOLA
DOCUMENT NUMBER: IND92030152
TITLE: Primary structure of protein moiety of Penicillium notatum **phospholipase B** deduced from the cDNA.
AUTHOR(S): Masuda, N.; Kitamura, N.; Saito, K.
CORPORATE SOURCE: Kansai Medical University, Moriguchi, Osaka, Japan
AVAILABILITY: DNAL (QP501.E8)
SOURCE: European journal of biochemistry, Dec 1991. Vol. 202, No. 3. p. 783-787
Publisher: New York, NY : Springer-Verlag New York Inc.
CODEN: EJBCAI; ISSN: 0014-2956
NOTE: Includes references.
DOCUMENT TYPE: Article
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English
AB **Phospholipase B** has not yet been well defined. The most important points about this enzyme are its relationships with lysophospholipase and phospholipase A1. As reported [Saito, K., Sugatani, J. & Okumura, T. (1991) Methods Enzymol. 197, 446-456], Penicillium notatum **phospholipase B** is a glycoprotein with a molecular mass of 95 kDa and intrinsic lysophospholipase and **phospholipase B** activities; however, by endogenous proteolytic modification, its **phospholipase B** activity is lost almost completely, whereas its lysophospholipase activity remains unchanged. A cDNA library of P. notatum was screened by hybridization with two synthetic oligodeoxyribonucleotide probes, which corresponds to two different pentapeptides of the enzyme. A hybridization-positive clone, pPLB18, was isolated and its nucleotide sequence was determined. The deduced amino acid sequence was quite different from that found previously. Therefore, we rescreened the cDNA library with a Sau3AI fragment derived from pPLB18 and isolated a new clone, pPLB15. Comparison of the nucleotide sequences of pPLB15 and pPLB18 revealed that pPLB18 contained an insertion sequence of 53 bp. Consequently, the reading frame was open downstream for 603 amino acid residues. From the assigned sequence, it was deduced that the limited proteolysis occurred between Leu175 and Asp176; eight cysteine residues and 16 potential N-glycosylation sites were also found. No amino acid sequence similarity was found with other proteins, including other phospholipases.

L2 ANSWER 17 OF 44 AGRICOLA
ACCESSION NUMBER: 92:54851 AGRICOLA
DOCUMENT NUMBER: IND92030013
TITLE: Purification and characterization of a lecithin-dependent haemolysin from Escherichia coli transformed by a Vibrio parahaemolyticus gene.
AUTHOR(S): Shinoda, S.; Matsuoka, H.; Tsuchie, T.; Miyoshi, S.I.; Yamamoto, S.; Taniguchi, H.; Mizuguchi, Y.
CORPORATE SOURCE: Okayam University, Tsuhima, Okayama, Japan
AVAILABILITY: DNAL (448.3 J823)
SOURCE: The Journal of general microbiology, Dec 1991. Vol. 137, No. pt.12. p. 2705-2711
Publisher: Reading : Society for General Microbiology.
CODEN: JGMIAN; ISSN: 0022-1287
NOTE: Includes references.
DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English
AB Lecithin-dependent haemolysin (LDH) of Vibrio parahaemolyticus was purified from Escherichia coli C600 transformed with a plasmid (pHL591) ligated with a 1.5 kb DNA fragment of V. parahaemolyticus. The final

preparation comprised two LDH proteins with different molecular masses which were immunologically cross-reactive and had the same enzymic activity. The LDH was a phospholipase hydrolysing both fatty acid esters of phospholipid, i.e. it hydrolysed phosphatidylcholine (PC) to lysophosphatidylcholine (LPC) and then LPC to glycerophosphorylcholine (GPC). From this point of view, LDH should be classified as a **phospholipase B. Phospholipase B**, however, does not usually show haemolytic activity, because the intermediate (LPC), which is the actual haemolytic agent, is immediately hydrolysed to the final product (GPC). On the other hand, LPC formed by LDH action was comparatively stable, because the rates of the two reactions catalysed by LDH, PC to LPC and LPC to GPC, are almost the same.

This is the reason that LDH shows haemolytic activity. Therefore, LDH of V. parahaemolyticus is an atypical phospholipase to be designated as phospholipase A2/lysophospholipase.

L2 ANSWER 18 OF 44 AGRICOLA
ACCESSION NUMBER: 91:24115 AGRICOLA
DOCUMENT NUMBER: IND91009810
TITLE: Hemolytic potency and phospholipase activity of some bee and wasp venoms.
AUTHOR(S): Watala, C.; Kowalczyk, J.K.
CORPORATE SOURCE: University of Lodz, Lodz, Poland
AVAILABILITY: DNAL (QP901.C6)
SOURCE: Comparative biochemistry and physiology : C : Comparative pharmacology and toxicology, 1990. Vol. 97, No. 1. p. 187-194
Publisher: Oxford : Pergamon Press.
CODEN: CBPCB5; ISSN: 0306-4492
NOTE: Includes references.
DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English
AB 1. The action of crude venoms of four aculeate species: Apis mellifera, Vespa crabro, Vespula germanica and Vespula vulgaris on human erythrocytes was investigated in order to determine the lytic and phospholipase activity of different aculeate venoms and their ability to induce red blood cell hemolysis. 2. Bee venom was the only extract to completely lyse red blood cells at the concentration of 2-3 microgram/ml. 3. Phospholipase activity in all of the examined vespid venoms was similar and the highest value was recorded in V. germanica. 4. Vespid venoms exhibited **phospholipase B** activity, which is lacking in honeybee venom. 5. In all membrane phospholipids but lecithin, lysophospholipase activity of vespid venoms was 2-6 times lower than the relevant phospholipase activity. 6. The incubation of red blood cells with purified bee venom phospholipase A2 was not accompanied by lysis and, when supplemented with purified melittin, the increase of red blood cell lysis was approximately 30%.

L2 ANSWER 19 OF 44 AGRICOLA
ACCESSION NUMBER: 89:66941 AGRICOLA
DOCUMENT NUMBER: IND89032974
TITLE: **Phospholipases B** from Japanese yellow hornet (Vespa xanthoptera) venom.
AUTHOR(S): Takasaki, C.; Fukumoto, M.
CORPORATE SOURCE: Tohoku University, Sendai, Japan
AVAILABILITY: DNAL (391.8 T66)
SOURCE: Toxicon, 1989. Vol. 27, No. 4. p. 449-458
Publisher: Oxford : Pergamon Press.
CODEN: TOXIA6; ISSN: 0041-0101
NOTE: Includes references.

DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English

L2 ANSWER 20 OF 44 AGRICOLA
ACCESSION NUMBER: 88:110327 AGRICOLA
DOCUMENT NUMBER: IND88042913
TITLE: Purification and some properties of membrane-bound **phospholipase B** from Torulaspora delbrueckii.
AUTHOR(S): Kuwabara, Y.; Maruyama, M.; Watanabe, Y.; Tanaka, S.; Takakuwa, M.; Tamai, Y.
AVAILABILITY: DNAL (385 J822)
SOURCE: Journal of biochemistry, Aug 1988. Vol. 104, No. 2. p. 236-241
Publisher: Tokyo : Japanese Biochemical Society.
CODEN: JOBIAO; ISSN: 0021-924X
NOTE: Includes references.
DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English

L2 ANSWER 21 OF 44 AGRICOLA
ACCESSION NUMBER: 87:22434 AGRICOLA
DOCUMENT NUMBER: IND87009531
TITLE: Molecular relationship between two types of **phospholipase B** from Penicillium notatum and reconstitution of active enzyme from its peptide fragments.
AUTHOR(S): Takeuchi, Y.; Okumura, T.; Sugatani, J.; Saito, K.
AVAILABILITY: DNAL (381 AR2)
SOURCE: Archives of biochemistry and biophysics, Jan 1987. Vol. 252, No. 1. p. 206-217 ill
Publisher: Duluth, Minn. : Academic Press.
CODEN: ABBIA4; ISSN: 0003-9861
NOTE: Includes references.
DOCUMENT TYPE: Article
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English

L2 ANSWER 22 OF 44 AGRICOLA
ACCESSION NUMBER: 85:91087 AGRICOLA
DOCUMENT NUMBER: IND85072625
TITLE: Phosphorylation of **phospholipase B** in the plasma membrane of Saccharomyces cerevisiae.
AUTHOR(S): Witt, W.; Wille, P.; Fuhrmann, G.F.
AVAILABILITY: DNAL (QR1.F44)
SOURCE: FEMS microbiology letters - Federation of European Microbiological Societies, Oct/Nov 1985. Vol. 30, No. 1/2. p. 27-31 ill
Publisher: Amsterdam : Elsevier Science Publishers.
CODEN: FMLED7; ISSN: 0378-1097
NOTE: Includes 13 references.
DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English

L2 ANSWER 23 OF 44 AGRICOLA
ACCESSION NUMBER: 85:91066 AGRICOLA
DOCUMENT NUMBER: IND85072604
TITLE: Intestinal **phospholipase B** acitivty in pigs inoculated with transmissible gastroenteritis virus.
AUTHOR(S): Goven, A.J.; DeBuysscher, E.V.
AVAILABILITY: DNAL (41.8 AM3A)

SOURCE: American journal of veterinary research, July 1985. Vol. 46, No. 7. p. 1503-1505
Publisher: Schaumburg, Ill. : American Veterinary Medical Association.
CODEN: AJVRAH; ISSN: 0002-9645
NOTE: Includes 14 references.
DOCUMENT TYPE: Article
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English

L2 ANSWER 24 OF 44 AGRICOLA
ACCESSION NUMBER: 85:73477 AGRICOLA
DOCUMENT NUMBER: IND85056823
TITLE: Purification and some properties of soluble **phospholipase B** from baker's yeast (Saccharomyces cerevisiae).
AUTHOR(S): Ichimasa, M.; Shiobara, M.
AVAILABILITY: DNAL (385 AG8B)
SOURCE: Agricultural and biological chemistry, Apr 1985. Vol. 49, No. 4. p. 1083-1089 ill
Publisher: Tokyo : Agricultural Chemical Society of Japan.
CODEN: ABCHA6; ISSN: 0002-1369
NOTE: Includes 23 references.
DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English

L2 ANSWER 25 OF 44 AGRICOLA
ACCESSION NUMBER: 85:4005 AGRICOLA
DOCUMENT NUMBER: IND85001926
TITLE: Tissue eosinophil numbers and **phospholipase B** activity in mice infected with Trichinella spiralis.
AUTHOR(S): Wilkes, S.D.; Goven, A.J.
AVAILABILITY: DNAL (QH547.I55)
SOURCE: International journal for parasitology, Oct 1984. Vol. 14, No. 5. p. 479-482
Publisher: Oxford : Pergamon Press.
CODEN: IJPYBT; ISSN: 0020-7519
NOTE: Includes references.
DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English

L2 ANSWER 26 OF 44 AGRICOLA
ACCESSION NUMBER: 84:153943 AGRICOLA
DOCUMENT NUMBER: IND84110352
TITLE: Secretion of **phospholipase B** from Saccharomyces cerevisiae [Yeasts].
AUTHOR(S): Witt, W.; Mertsching, A.; Konig, E.
AVAILABILITY: DNAL (381 B522 (L))
SOURCE: Biochimica et biophysica acta : lipids and lipid metabolism., Aug 15, 1984 Vol. 795, No. 1. p. 117-124 ill
Publisher: Amsterdam : Elsevier Biomedical Press.
ISSN: 0006-3002
NOTE: Includes 18 references.
DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English

L2 ANSWER 27 OF 44 AGRICOLA
ACCESSION NUMBER: 84:153942 AGRICOLA
DOCUMENT NUMBER: IND84110351

TITLE: **Phospholipase B** from the plasma membrane of Saccharomyces cerevisiae--separation of two forms with different carbohydrate content [Yeasts].
AUTHOR(S): Witt, W.; Schweingruber, M.E.; Mertsching, A.
AVAILABILITY: DNAL (381 B522 (L))
SOURCE: Biochimica et biophysica acta : lipids and lipid metabolism., Aug 15, 1984 Vol. 795, No. 1. p. 108-116 ill
Publisher: Amsterdam : Elsevier Biomedical Press.
ISSN: 0006-3002
NOTE: Includes 20 references.
DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English

L2 ANSWER 28 OF 44 AGRICOLA
ACCESSION NUMBER: 84:91076 AGRICOLA
DOCUMENT NUMBER: PAR84004037
TITLE: The cellular transfer of immunity to Nippostrongylus brasiliensis and its effect on worm burden, eosinophilia and **phospholipase B** activity.
AUTHOR(S): Goven, A.J.
AVAILABILITY: DNAL (436.8 AC8)
SOURCE: Acta parasitologica polonica., June 30, 1983 Vol. 28, No. 25-37. p. 337-342
Publisher: Warszawa : Panstwowe Wydawn. Naukowe.
ISSN: 0065-1478
DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English
SUMMARY LANGUAGE: Polish

L2 ANSWER 29 OF 44 AGRICOLA
ACCESSION NUMBER: 84:64002 AGRICOLA
DOCUMENT NUMBER: IND84044663
TITLE: Purification and properties of a membrane-bound **phospholipase B** from baker's yeast (Saccharomyces cerevisiae).
AUTHOR(S): Ichimasa, M.; Morooka, T.; Niimura, T.
AVAILABILITY: DNAL (385 J822)
SOURCE: Journal of biochemistry., Jan 1984 Vol. 95, No. 1. p. 137-145 ill
Publisher: Tokyo : Japanese Biochemical Society.
ISSN: 0021-924X
NOTE: Includes references.
DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English

L2 ANSWER 30 OF 44 AGRICOLA
ACCESSION NUMBER: 83:151643 AGRICOLA
DOCUMENT NUMBER: PAR83005417
TITLE: Effect of anti-eosinophil serum on **phospholipase B** activity in mice infected with Trichinella spiralis.
AUTHOR(S): Goven, A.J.
AVAILABILITY: DNAL (448.8 J824)
SOURCE: The Journal of parasitology., Feb 1983 Vol. 69, No. 1. p. 88-90
Publisher: Lawrence : American Society of Parasitologists.
ISSN: 0022-3395
DOCUMENT TYPE: Article

FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English
AB Trichinella spiralis, mice, administration of anti-eosinophil serum caused
significant temporally-related suppression in both peripheral eosinophilia
and intestinal **phospholipase B** activity

L2 ANSWER 31 OF 44 AGRICOLA
ACCESSION NUMBER: 83:137446 AGRICOLA
DOCUMENT NUMBER: PAR83003301
TITLE: Elevated levels of **phospholipase B** in mice infected and challenged with Plasmodium yoelii.
AUTHOR(S): Ngwenya, B.Z.; Capaci, B.L.
AVAILABILITY: DNAL (448.8 J824)
SOURCE: The Journal of parasitology., Oct 1982 Vol. 68, No. 5.
p. 749-754
Publisher: Lawrence : American Society of Parasitologists.
ISSN: 0022-3395
DOCUMENT TYPE: Article
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English
AB Plasmodium yoelii, infected mice and infected and challenged mice, increases in spleen and serum **phospholipase B** activity, relationship to rise and time course of parasitemia and splenomegaly, results implicate **phospholipase B** as playing role in immunopathology associated with malaria infection

L2 ANSWER 32 OF 44 AGRICOLA
ACCESSION NUMBER: 83:118240 AGRICOLA
DOCUMENT NUMBER: IND83101266
TITLE: Effect of anti-eosinophil serum on **phospholipase B** activity in mice infected with Trichinella spiralis Trichinosis.
AUTHOR(S): Goven, A.J.
AVAILABILITY: DNAL (448.8 J824)
SOURCE: The Journal of parasitology., Feb 1983 Vol. 69, No. 1.
p. 88-90
Publisher: Lawrence : American Society of Parasitologists.
ISSN: 0022-3395
NOTE: Includes references.
DOCUMENT TYPE: Article
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English

L2 ANSWER 33 OF 44 AGRICOLA
ACCESSION NUMBER: 83:32344 AGRICOLA
DOCUMENT NUMBER: IND83024666
TITLE: Elevated levels of **phospholipase B** in mice infected and challenged with Plasmodium yoelii
Enzymes, parasitism.
AUTHOR(S): Ngwenya, B.Z.; Capaci, B.L.
AVAILABILITY: DNAL (448.8 J824)
SOURCE: The Journal of parasitology., Oct 1982 Vol. 68, No. 5.
p. 749-754 ill
Publisher: Lawrence : American Society of Parasitologists.
ISSN: 0022-3395
NOTE: 16 ref.

DOCUMENT TYPE: Article
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English

L2 ANSWER 34 OF 44 AGRICOLA
ACCESSION NUMBER: 81:134149 AGRICOLA
DOCUMENT NUMBER: IND81111822
TITLE: Role of the carbohydrate moiety of **phospholipase B** from Penicillium notatum Fungi in enzyme activity.
AUTHOR(S): Okumura, T.; Sugatani, J.; Saito, K.
AVAILABILITY: DNAL (381 AR2)
SOURCE: Archives of biochemistry and biophysics., Oct 1, 1981 Vol. 211, No. 1. p. 419-429 ill
Publisher: New York, Academic Press.
ISSN: 0003-9861
NOTE: 16 ref.
DOCUMENT TYPE: Article
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English

L2 ANSWER 35 OF 44 AGRICOLA
ACCESSION NUMBER: 79:114762 AGRICOLA
DOCUMENT NUMBER: IND79099960
TITLE: The **phospholipase B** content of the intestines of sensitized rats challenged with varied larvae doses of Nippostrongylus brasiliensis.
AUTHOR(S): Goven, A.J.
AVAILABILITY: DNAL (QH547.I55)
SOURCE: International journal for parasitology., Aug 1979 Vol. 9, No. 4. p. 345-349 ill
Publisher: Oxford, Pergamon Press.
ISSN: 0020-7519
NOTE: 19 ref.
DOCUMENT TYPE: Article
LANGUAGE: English

L2 ANSWER 36 OF 44 AGRICOLA
ACCESSION NUMBER: 79:107168 AGRICOLA
DOCUMENT NUMBER: IND79096000
TITLE: The **phospholipase B** content of the intestines of rats infected with varied larvae doses of Nippostrongylus brasiliensis.
AUTHOR(S): Govern, A.J.
AVAILABILITY: DNAL (QH547.I55)
SOURCE: International journal for parasitology., June 1979 Vol. 9, No. 3. p. 193-198 ill
Publisher: Oxford, Pergamon Press.
ISSN: 0020-7519
NOTE: 15 ref.
DOCUMENT TYPE: Article
LANGUAGE: English

L2 ANSWER 37 OF 44 AGRICOLA
ACCESSION NUMBER: 79:95763 AGRICOLA
DOCUMENT NUMBER: IND79084536
TITLE: Intestinal **phospholipase B** activity in swine inoculated with Trichinella spiralis.
AUTHOR(S): Goven, A.J.; DeBuysscher, E.V.
AVAILABILITY: DNAL (41.8 AM3A)
SOURCE: American journal of veterinary research., Oct 1979 Vol. 40, No. 10. p. 1469-1471 ill
Publisher: Schaumburg, Ill., American Veterinary Medical Association.

ISSN: 0002-9645
NOTE: 16 ref.
DOCUMENT TYPE: Article
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English

L2 ANSWER 38 OF 44 AGRICOLA
ACCESSION NUMBER: 79:73428 AGRICOLA
DOCUMENT NUMBER: IND79062755
TITLE: Phospholipases produced by plant pathogenic fungus Corticium centrifugum: partial purification and properties of **phospholipase B** and lysophospholipase.
AUTHOR(S): Uehara, S.; Hasegawa, K.; Iwai, K.
CORPORATE SOURCE: Kyoto Daigaku; Shokuryo Kagaku Kenkyu-sho
AVAILABILITY: DNAL (389.9 K99R)
SOURCE: Kyoto Daigaku Shokuryo Kagaku Kenkyu-sho hokoku Bulletin of the Research Institute for Food Science, Kyoto University, Mar 1979 No. 42. p. 9-22 ill Publisher: Kyoto, Daigaku
NOTE: 21 ref.
DOCUMENT TYPE: Article
LANGUAGE: English

L2 ANSWER 39 OF 44 AGRICOLA
ACCESSION NUMBER: 78:99507 AGRICOLA
DOCUMENT NUMBER: 78-9077479
TITLE: Studies on a **phospholipase B** from Penicillium notatum [Fungi]: Substrate specificity
AUTHOR(S): Sugatani, J; Kawasaki, N; Saito, K
AVAILABILITY: DNAL (381 B522)
SOURCE: Biochim Biophys Acta, Apr 28, 1978 Vol. 529, No. 1, pp. 29-37. Ref.
DOCUMENT TYPE: Journal; Article
LANGUAGE: English

L2 ANSWER 40 OF 44 AGRICOLA
ACCESSION NUMBER: 77:64522 AGRICOLA
DOCUMENT NUMBER: 77-9058605
TITLE: Positional specificity of **phospholipase B** of Penicillium notatum [Fungi]
AUTHOR(S): Nishijima, M; Nojima, S
AVAILABILITY: DNAL (385 J822)
SOURCE: J Biochem (Tokyo), Mar 1977 Vol. 81, No. 3, pp. 533-537. Ref.
DOCUMENT TYPE: Journal; Article
LANGUAGE: English

L2 ANSWER 41 OF 44 AGRICOLA
ACCESSION NUMBER: 76:52132 AGRICOLA
DOCUMENT NUMBER: 76-9052626
TITLE: The association in mice of intestinal inflammation, elevated levels of **phospholipase B**, and expulsion of Trichinella spiralis
AUTHOR(S): Larsh, J E Jr
AVAILABILITY: DNAL (436.8 W63)
SOURCE: Wiad Parazytol, 1975 Vol. 21, No. 4/5, pp. 679-682. Ref.
DOCUMENT TYPE: Journal; Article
LANGUAGE: English

L2 ANSWER 42 OF 44 AGRICOLA
ACCESSION NUMBER: 74:106812 AGRICOLA
DOCUMENT NUMBER: 74-9108084
TITLE: Substrate specificity of a highly purified **phospholipase B** from Penicillium

notatum
AUTHOR(S): Saito, K; Kates, M
AVAILABILITY: DNAL (381 B522)
SOURCE: Biochim Biophys Acta, Nov 18, 1974 Vol. 369, No. 2, pp. 245-253. Ref.
DOCUMENT TYPE: Journal; Article
LANGUAGE: English

L2 ANSWER 43 OF 44 AGRICOLA
ACCESSION NUMBER: 73:79829 AGRICOLA
DOCUMENT NUMBER: 73-9204821
TITLE: Activity of **phospholipase B** in barley during growth of the seed
Uber die Aktivitat der **Phospholipase B** der Gerste im Verlaufe der Entwicklung des Kornes
AUTHOR(S): Rebmann, H; Acker, L
AVAILABILITY: DNAL (384 C422)
SOURCE: Fette Seifen Anstrichm, July 1973 Vol. 75, No. 7, pp. 409-411. Eng. Sum.
DOCUMENT TYPE: Journal; Article
LANGUAGE: German

L2 ANSWER 44 OF 44 AGRICOLA
ACCESSION NUMBER: 72:86814 AGRICOLA
DOCUMENT NUMBER: 72-9087150
TITLE: Effect of **phospholipase B** (lysolecithinase) on polycaryocytogenic and hemolytic activities of Sendai virus
Effetto della fosfolipasi B (lisolecitinasi) sulla attivita policariocitogena ed emolitica del virus Sendai
AUTHOR(S): Barbanti-Brodano, G; Possati, L; La Placa, M
AVAILABILITY: DNAL (41.8 AR25)
SOURCE: Arch Vet Ital, Apr 30, 1972 Vol. 23, No. 2, pp. 69-72.
Eng. Sum.
DOCUMENT TYPE: Journal; Article
LANGUAGE: Italian

=> l2 and aspergillus

L2 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l2 and aspergillus

```
         11284 ASPERGILLUS
           152 ASPERGILLI
             1 ASPERGILLIS
         11356 ASPERGILLUS
                 (ASPERGILLUS OR ASPERGILLI OR ASPERGILLIS)
L3           0 L2 AND ASPERGILLUS
```

=> file embase biosis scisearch caplus medline biotecds agricola

'BIOTECDS' IS NOT A VALID FILE NAME
Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files that are available. If you have requested multiple files, you can specify a corrected file name or you can enter "IGNORE" to continue accessing the remaining file names entered.
ENTER A FILE NAME OR (IGNORE):biotechds

COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	53.53	58.22

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FILE 'AGRICOLA' ENTERED AT 13:06:42 ON 02 MAR 2001

=> phopholipase B

PHOPHOLIPASE IS NOT A RECOGNIZED COMMAND
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"HELP COMMANDS" at an arrow prompt (=>).

=> s phospholipase B

L4 961 PHOSPHOLIPASE B

=> l4 and aspergillus

L4 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l4 and aspergillus

L5 23 L4 AND ASPERGILLUS

=> dup rem l4

PROCESSING COMPLETED FOR L4
L6 427 DUP REM L4 (534 DUPLICATES REMOVED)

=> dup rem l5

PROCESSING COMPLETED FOR L5
L7 12 DUP REM L5 (11 DUPLICATES REMOVED)

=> d ibib abs l7 1-12

L7 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:802341 CAPLUS
DOCUMENT NUMBER: 133:345609
TITLE: **Phospholipase B** and its gene from **Aspergillus** oryzae for use in improving stability and decreasing stickiness of dough in baking

INVENTOR(S): Harris, Paul; Brown, Kimberly M.
PATENT ASSIGNEE(S): Novo Nordisk Biotech, Inc., USA
SOURCE: U.S., 24 pp.
CODEN: USXXAM

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6146869	A	20001114	US 1999-426072	19991021

AB The present invention relates to isolated polypeptides having **phospholipase B** activity and isolated nucleic acid sequences encoding the polypeptides from **Aspergillus** oryzae HowB430. The invention also relates to nucleic acid constructs, vectors, and host cells comprising the nucleic acid sequences as well as methods for producing and using the polypeptides. Thermostability and other properties of this **phospholipase B** suggest it may be useful in increasing stability and decreasing stickiness of dough in the prepn. of bakery products.

REFERENCE COUNT: 5
REFERENCE(S): CAPLUS
(1) Leidich; J Biol Chem 1998, V273(40), P26078
(2) Masuda; Eur J Biochem 1991, V202, P783 CAPLUS
(3) Masuda; Eur J Biochem 1998, V202, P783
(4) Memon; FEMS Microbiology Letters 1983, V18, P15 CAPLUS
(5) Sugiyama; Nedical Mycology 1998, V37, P61

L7 ANSWER 2 OF 12 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.DUPLICATE 1
ACCESSION NUMBER: 2000026977 EMBASE
TITLE: Potential role of phospholipases in virulence and fungal pathogenesis.
AUTHOR: Ghannoum M.A.
CORPORATE SOURCE: M.A. Ghannoum, University Hospitals of Cleveland, Department of Dermatology, Case Western Reserve University, Cleveland, OH 44106-5028, United States. mag3@po.cwru.edu
SOURCE: Clinical Microbiology Reviews, (2000) 13/1 (122-143).
Refs: 229
ISSN: 0893-8512 CODEN: CMIREX
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Microbial pathogens use a number of genetic strategies to invade the host and cause infection. These common themes are found throughout microbial systems. Secretion of enzymes, such as phospholipase, has been proposed as one of these themes that are used by bacteria, parasites, and pathogenic fungi. The role of extracellular phospholipase as a potential virulence factor in pathogenic fungi, including Candida albicans, Cryptococcus neoformans, and **Aspergillus**, has gained credence recently. In this review, data implicating phospholipase as a virulence factor in C. albicans, Candida glabrata, C. neoformans, and A. fumigatus are presented.

A detailed description of the molecular and biochemical approaches used to more definitively delineate the role of phospholipase in the virulence of C. albicans is also covered. These approaches resulted in cloning of three genes encoding candidal phospholipases (caPLP1, caPLB2, and PLD). By using

targeted gene disruption, C. albicans null mutants that failed to secrete **phospholipase B**, encoded by caPLB1, were constructed. When these isogenic strain pairs were tested in two clinically relevant murine models of candidiasis, deletion of caPLB1 was shown to lead to attenuation of candidal virulence. Importantly, immunogold electron microscopy studies showed that C. albicans secretes this enzyme during the infectious process. These data indicate that **phospholipase B** is essential for candidal virulence. Although the mechanism(s) through which phospholipase modulates fungal virulence is still under investigations, early data suggest that direct host cell damage and lysis are the main mechanisms contributing to fungal virulence. Since the importance of phospholipases in fungal virulence is already known, the next challenge will be to utilize these lytic enzymes as therapeutic and diagnostic targets.

L7 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:672951 CAPLUS
DOCUMENT NUMBER: 131:309993
TITLE: Edible oil degumming with phospholipase
INVENTOR(S): Clausen, Kim
PATENT ASSIGNEE(S): Novo Nordisk A/S, Den.
SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9953001	A1	19991021	WO 1999-DK202	19990407
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9930263	A1	19991101	AU 1999-30263	19990407
EP 1071734	A1	20010131	EP 1999-911648	19990407
R: DE, GB, NL				
PRIORITY APPLN. INFO.:			DK 1998-506	19980408
			WO 1999-DK202	19990407

AB Edible oils are degummed by using microbial phospholipase and a small amt. of water. Thus, during degumming of water-degummed rapeseed oil by using Fusarium oxysporum phospholipase at a water content of 5.3%, the phosphorus content of the oil phase decreased from 243 ppm initially to 10 ppm after 2 h.
REFERENCE COUNT: 7
REFERENCE(S): (1) Aalrust, E; US 5264367 A 1993 CAPLUS
(4) Buchold, H; US 5558781 A 1996 CAPLUS
(5) Novo Nordisk A/S; WO 9818912 A1 1998 CAPLUS
(6) Novo Nordisk A/S; WO 9826057 A1 1998 CAPLUS
(7) Showa Sangyo Co Ltd; EP 0622446 A2 1994 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 12 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.DUPLICATE 2
ACCESSION NUMBER: 1999085322 EMBASE
TITLE: Molecular cloning of a second **phospholipase B** gene, caPLB2 from Candida albicans.
AUTHOR: Sugiyama Y.; Nakashima S.; Mirbod F.; Kanoh H.; Kitajima

Y.; Ghannoum M.A.; Nozawa Y.
CORPORATE SOURCE: Y. Nozawa, Department of Biochemistry, Gifu University School of Medicine, Tsukasamachi-40, Gifu 500-8705, Japan. nozawa@cc.gifu-u.ac.jp
SOURCE: Medical Mycology, (1999) 37/1 (61-67).
Refs: 23
ISSN: 1369-3786 CODEN: MEMYFR
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Accumulating evidence suggests that **phospholipase B**, secreted by pathogenic fungi such as Candida albicans, Cryptococcus neoformans and **Aspergillus** fumigatus, functions as one of the virulence factors. In the present study, we have attempted to clone **phospholipase B** gene from C. albicans. By RT-PCR analysis with degenerate primers based on conserved regions of **phospholipase B** from Saccharomyces cerevisiae. Penicillium notatum and Torulaspora two similar but different cDNA fragments were obtained. One corresponded to the partial sequence of caPLB1, recently cloned **phospholipase B** gene from C. albicans by a different approach. The other fragments contained sequences similar to the corresponding sequences of **phospholipase B** from other fungi. The presence of two related genes was confirmed by Southern and Northern blot analyses. The full length of the second C. albicans **phospholipase B** gene (caPLB2) encoded a putative protein with 608 amino acids and contained a potential signal peptide sequence and a putative catalytic region, which are found in **phospholipase B** from other fungi. Consistent with the findings of caPLB1, caPLB2 also lacks a cluster of hydrophobic amino acids at the COOH-terminal, which may function as a signal of glycosylphosphatidylinositol anchor.

L7 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1998:406067 CAPLUS
DOCUMENT NUMBER: 129:80975
TITLE: Reduction of phosphorus levels in edible oils using phospholipase and sequence and expression of phospholipase cDNA of Fusarium
INVENTOR(S): Clausen, Ib Groth; Patkar, Shamkant Anant; Borch, Kim; Halkier, Torben; Barfoed, Martin; Clausen, Kim; Fuglsang, Claus Crone; Dybdal, Lone
PATENT ASSIGNEE(S): Novo Nordisk A/S, Den.
SOURCE: PCT Int. Appl., 125 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9826057	A1	19980618	WO 1997-DK557	19971209
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9851878	A1	19980703	AU 1998-51878	19971209
EP 869167	A2	19981007	EP 1997-610056	19971209
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

CN 1245532	A	20000223	CN 1997-181706	19971209
JP 2000507458	T2	20000620	JP 1998-526105	19971209
US 6103505	A	20000815	US 1997-988111	19971209
US 6143545	A	20001107	US 1999-387922	19990901
PRIORITY APPLN. INFO.:			DK 1996-1408	19961209
			DK 1996-1432	19961216
			DK 1997-190	19970221
			DK 1997-211	19970226
			DK 1997-1283	19971111
			US 1997-39791	19970304
			US 1997-988111	19971209
			WO 1997-DK557	19971209

AB The present invention relates to a method for reducing the content of phosphorus contg. components in an edible oil comprising a high amt. of non-hydratable phosphorus content, wherein said method comprises use of a phospholipase. Further the present invention relates to an enzyme with phospholipase activity, a cloned DNA sequence encoding the enzyme with phospholipase activity, a method of producing the enzyme, and the use of said enzyme for a no. of industrial applications. The cDNA for a phospholipase of F. oxysporum DSM 2672 was cloned, sequenced, and expressed in **Aspergillus** oryzae. The enzyme has a pH optimum at .gtoreq.pH 9. At pH 5, the temp. optimum is .apprx.40.degree.. The enzyme has both phospholipase and lipase activities. The Fusarium enzyme was used for enzymic degumming of rape seed and soybean oils and as a bread improver.

L7 ANSWER 6 OF 12 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1998:416806 BIOSIS
DOCUMENT NUMBER: PREV199800416806
TITLE: **Phospholipase B** is the predominant phospholipase secreted by **Aspergillus** fumigatus and A. flavus.
AUTHOR(S): Koul, A. (1); Jessup, C. J. (1); Deluca, D. J. (1); Elnicky, C. J.; Nunez, M.; Washburn, R. G.; Ghannoum, M. A.
(1)
CORPORATE SOURCE: (1) Ctr. Med. Mycol., Univ. Hosp. Cleveland, Case Western Reserve Univ. Cleveland, OH USA
SOURCE: Abstracts of the General Meeting of the American Society for Microbiology, (1998) Vol. 98, pp. 266.
Meeting Info.: 98th General Meeting of the American Society for Microbiology Atlanta, Georgia, USA May 17-21, 1998
American Society for Microbiology
. ISSN: 1060-2011.
DOCUMENT TYPE: Conference
LANGUAGE: English

L7 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2001 ACS DUPLICATE 3
ACCESSION NUMBER: 1998:425549 CAPLUS
DOCUMENT NUMBER: 129:65254
TITLE: Extracellular phospholipases as universal virulence factor in pathogenic fungi
AUTHOR(S): Ghannoum, Mahmoud A.
CORPORATE SOURCE: Center for Medical Mycology, Mycology Reference Laboratory, Case Western Reserve University, Cleveland, OH, USA
SOURCE: Nippon Ishinkin Gakkai Zasshi (1998), 39(2), 55-59
CODEN: NIGZE4; ISSN: 0916-4804
PUBLISHER: Nippon Ishinkin Gakkai
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 19 refs. Microbial pathogens use a no. of genetic strategies to invade the host and cause infection. These common themes are found throughout microbial virulence factors. Secretion of enzymes, such as phospholipase, has been proposed as one of these themes which is

used by bacteria, parasite, and pathogenic fungi. The role of extracellular phospholipase as a potential virulence factor in pathogenic fungi, including Candida albicans, Cryptococcus neoformans and **Aspergillus** has gained credence recently. In this address data implicating phospholipase as a virulence factor in Cryptococcus neoformans and **Aspergillus** fumigatus will be presented. This will be followed by a more detailed description of our mol. and biochem. approaches that were used to more definitively delineate the role of phospholipase in the virulence of C. albicans. First, we purified the **phospholipase B** protein, the dominant phospholipase secreted by C. albicans, obtained the amino acid sequence of its N-terminus and in internal peptide fragment, and used this information to clone the gene encoding the protein using a PCR-based approach. Nucleotide sequence anal. revealed an ORF of 1818 bp that predicted for a pre-protein of 605 amino acid residues. The deduced amino acid sequences of the cloned gene (PLB1) showed 42.3%, 45%, and 47.8% overall sequence identity, with the reported sequences of **phospholipase B** cloned from Penicillium notatum, Saccharomyces cerevisiae, and Saccharomyces rosei, resp. Second, using targeted gene disruption, URA blaster, we created C. albicans null mutants which failed to secrete **phospholipase B**. Third, we tested the ability of these isogenic strain pairs to cause lethality using a murine model of hematogenously disseminated candidiasis. Our data demonstrate that the parent phospholipase-producing strain caused more fatality in mice, while the null phospholipase-deficient strain was avirulent. Importantly, the parent and null mutants had similar growth and germination rates. These data prove that **phospholipase B** is essential for candidal virulence, and pave the way for studies directed at detg. the mechanism/s through which phospholipase modulate candidal virulence. Understanding phospholipase as a common theme in fungal pathogenicity is crit. for developing new antifungal strategies based on anti-virulence.

L7 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1997:761952 CAPLUS
DOCUMENT NUMBER: 128:71646
TITLE: Recombinant lysophospholipase from **Aspergillus** and its use in treatment of starch hydrolyzates
INVENTOR(S): Loffler, Fridolin; Khanh, Quoc Nguyen; Schuster, Erwin; Sprossler, Bruno; Wolf, Sabine; Thomas, Lutz
PATENT ASSIGNEE(S): Rohm G.m.b.H., Germany
SOURCE: Eur. Pat. Appl., 26 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 808903	A2	19971126	EP 1997-104976	19970324
EP 808903	A3	19990714		
R: BE, DE, FR, GB, IT, NL				
DE 19620649	A1	19971127	DE 1996-19620649	19960522
AU 9719976	A1	19971127	AU 1997-19976	19970501
AU 718990	B2	20000504		
CA 2205411	AA	19971122	CA 1997-2205411	19970515
US 5965422	A	19991012	US 1997-859106	19970520

PRIORITY APPLN. INFO.: DE 1996-19620649 19960522

AB A. foetidus lysophospholipase and the gene encoding it as well as cloning and expression of the gene are disclosed. The recombinant enzyme may be used for removal of phospholipids from starch hydrolyzates, e.g., in prepn. of maltose syrup. The A. foetidus lysophospholipase gene was cloned, sequenced, and expressed in A. sojae.

L7 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1996:129622 CAPLUS
DOCUMENT NUMBER: 124:170184
TITLE: Evidence of multiple extracellular phospholipase activities of **Aspergillus** fumigatus
AUTHOR(S): Birch, Michael; Robson, Geoffrey; Law, Derek; Denning, David D.
CORPORATE SOURCE: Dep. Medicine, Univ. Manchester, Manchester, M13 9PT, UK
SOURCE: Infect. Immun. (1996), 64(3), 751-5
CODEN: INFIBR; ISSN: 0019-9567
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Extracellular phospholipase activity has been implicated in the pathogenesis of several bacterial infections. Recently, extracellular phospholipase activity has been proposed as a virulence factor in the opportunistic yeast Candida albicans. **Aspergillus** fumigatus is the most pathogenic member of its genus, responsible for >90% of infections. Previously, no specific virulence factors have been detd. We investigated the ability of A. fumigatus to produce extracellular phospholipases at 37.degree.C. Fast atom bombardment was used to compare lipid-contg. media before and at 5-h intervals during shaking culture of A. fumigatus. Lipids were extd. and analyzed. Many anions corresponding to phospholipid breakdown products were identified. Specific anion species identified indicated phospholipase A, B, C (PLC), and D activities. PLCV activity was further investigated by using the synthetic substrate p-nitrophenylphosphorylcholine. PLC activity was initially obsd. after 30 h of growth and accumulated to broth cultures up to 50 h. At 55 h, there was a sharp increase in PLC activity which coincided with cultures reaching the stationary phase. Activity of PLC was measured at different temps., with greater activity occurring at 37.degree.C than at lower temps. Phospholipases could represent a virulence determinant in A. fumigatus.

L7 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2001 ACS DUPLICATE 4
ACCESSION NUMBER: 1993:146304 CAPLUS
DOCUMENT NUMBER: 118:146304
TITLE: Manufacture of modified phospholipids with microorganisms
INVENTOR(S): Myoshi, Hirotoshi; Nakajima, Toshimitsu; Fukuda, Hideki
PATENT ASSIGNEE(S): Kanegafuchi Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04356192	A2	19921209	JP 1991-194830	19910708
PRIORITY APPLN. INFO.:			JP 1990-183129	19900710

AB Modified phospholipids are manufd. by treatment of phospholipids, or phospholipids and receptors, with dried microbial cells contg. enzymes, that transesterify or hydrolyze the fatty acid residues of the phospholipids, and enzymes that affect the polar moieties of the phospholipids. Streptomyces mediocidicus IFO 13202 was cultured in a medium contg. glucose, meat ext., peptone, and salts at 30.degree. and pH 7.0 for .apprx.2 days, the cells washed, soaked in acetone, filtered, vacuum-dried, and treated with phosphatidylcholine in hexane-Tris-HCl buffer (pH 8.0) at 37.degree. for 10 h to manuf. lysophosphatidylcholine 51, lysophosphatidic acid 28, phosphatidic acid 15, and

phosphatidylcholine 5%.

L7 ANSWER 11 OF 12 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.DUPLICATE 5
ACCESSION NUMBER: 83178025 EMBASE
DOCUMENT NUMBER: 1983178025
TITLE: **Phospholipase B** activity in mycelia of **Aspergillus** niger.
AUTHOR: Memon A.; Patterson J.D.E.; Shaw C.E.L.; Blain J.A.
CORPORATE SOURCE: Biochem. Div., Dep. Biosci. Biotechnol., Univ. Strathclyde, Todd Cent., Glasgow G4 0NR, United Kingdom
SOURCE: FEMS Microbiology Letters, (1983) 18/1-2 (15-18). CODEN: FMLED7
COUNTRY: Netherlands
DOCUMENT TYPE: Journal
FILE SEGMENT: 004 Microbiology
LANGUAGE: English

L7 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1978:166429 CAPLUS
DOCUMENT NUMBER: 88:166429
TITLE: The nature of mycelial lipolytic enzymes in filamentous fungi
AUTHOR(S): Blain, J. A.; Patterson, J. D. E.; Shaw, C. E. L.
CORPORATE SOURCE: Dep. Biochem., Univ. Strathclyde, Glasgow, Scot.
SOURCE: FEMS Microbiol. Lett. (1978), 3(2), 85-7 CODEN: FMLED7; ISSN: 0378-1097
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Anal. of mycelia of 13 strains of filamentous fungi at 24-h intervals from the 2nd to 7th day of growth revealed the presence of lipase and phospholipase activities. Phospholipase A1 and lysophospholipase were of common occurrence, whereas **phospholipase B** was dominant in some organisms. Phospholipase D was detected in some mycelial prepns., whereas phospholipase A2 was not found in any of the organisms tested.

=> d his

(FILE 'HOME' ENTERED AT 12:51:56 ON 02 MAR 2001)

FILE 'EMBASE, MEDLINE, BIOSIS, BIOTECHDS, SCISEARCH, CAPLUS' ENTERED AT 12:52:53 ON 02 MAR 2001

FILE 'AGRICOLA' ENTERED AT 12:53:22 ON 02 MAR 2001
L1 0 S PHOPHOLIPASE B
L2 44 S PHOSPHOLIPASE B
L3 0 S L2 AND ASPERGILLUS

FILE 'EMBASE, BIOSIS, SCISEARCH, CAPLUS, MEDLINE, BIOTECHDS, AGRICOLA' ENTERED AT 13:06:42 ON 02 MAR 2001
L4 961 S PHOSPHOLIPASE B
L5 23 S L4 AND ASPERGILLUS
L6 427 DUP REM L4 (534 DUPLICATES REMOVED)
L7 12 DUP REM L5 (11 DUPLICATES REMOVED)

=> l6 (p) clon?

L6 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l6 (p) clon?

PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L32 (P) CLON?'
   6 FILES SEARCHED...
L8   37 L6 (P) CLON?

=> d ibib abs l8 1-37

L8 ANSWER 1 OF 37 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2001027831 EMBASE
TITLE: Extracellular phospholipase activity is a virulence factor for Cryptococcus neoformans.
AUTHOR: Cox G.M.; McDade H.C.; Chen S.C.A.; Tucker S.C.; Gottfredsson M.; Wright L.C.; Sorrell T.C.; Leidich S.D.; Casadevall A.; Ghannoum M.A.; Perfect J.R.
CORPORATE SOURCE: G.M. Cox, Department of Medicine/Microbiology, Duke University Medical Center, Durham, NC, United States. gary.cox@duke.edu
SOURCE: Molecular Microbiology, (2001) 39/1 (166-175).
Refs: 36
ISSN: 0950-382X CODEN: MOMIEE
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The human pathogenic fungus Cryptococcus neoformans secretes a phospholipase enzyme that demonstrates **phospholipase B** (PLB), lysophospholipase hydrolase and lysophospholipase transacylase activities. This enzyme has been postulated to be a cryptococcal virulence factor. We **cloned** a phospholipase-encoding gene (PLB1) from C. neoformans and constructed plb1 mutants using targeted gene disruption. All three enzyme activities were markedly reduced in the mutants compared with the wild-type parent. The plb1 strains did not have any defects in the known cryptococcal virulence phenotypes of growth at 37.degree.C, capsule formation, laccase activity and urease activity. The plb1 strains were reconstituted using the wild-type locus and this resulted in restoration of all extracellular PLB activities, in vivo testing demonstrated that the plb1 strain was significantly less virulent than the control strains in both the mouse inhalational model and the rabbit meningitis model. We also found that the plb1 strain exhibited a growth defect in a macrophage-like cell line. These data demonstrate that secretory phospholipase is a virulence factor for C. neoformans.

L8 ANSWER 2 OF 37 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2000236068 EMBASE
TITLE: Spo1, a phospholipase B homolog, is required for spindle pole body duplication during meiosis in Saccharomyces cerevisiae.
AUTHOR: Tevzadze G.G.; Swift H.; Esposito R.E.
CORPORATE SOURCE: R.E. Esposito, Dept. of Molec. Genet./Cell Biology, University of Chicago, 920 East 58th Street, Chicago, IL 60637, United States. re-esposito@uchicago.edu
SOURCE: Chromosoma, (2000) 109/1-2 (72-85).
Refs: 69
ISSN: 0009-5915 CODEN: CHROAU
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English

AB The SPO1 gene was **cloned** and shown to encode an early meiotic transcript specifying a nuclear protein with extensive similarity to fungal and vertebrate phospholipase enzymes. Alteration of a conserved serine residue in the putative phospholipase active site, and presence of the spo1-1 temperature-sensitive mutation, which resides near this site, each result in loss of SPO1 function. The phenotype of a complete deletion indicates that SPO1 is dispensable for vegetative growth, premeiotic DNA synthesis and meiotic recombination. In contrast, it is required for Meiosis I (MI) and Meiosis II (MII) chromosome segregation and spore formation. In a null mutant .apprx.75% of cells arrest early at MI spindle pole body (SPB) duplication, .apprx.20% arrest at MII, and .apprx.5% arrest at spore formation. Progression beyond the first arrest point suggests the existence of functions partially redundant to Spo1 and that Spo1 is required at multiple stages. At present SPO1 is the only known gene required for SPB duplication in meiosis but not in mitosis. Its product may thus play a regulatory (rather than a structural) role in SPB function. The transcriptional program in the spo1 null is similar to the wild type early in meiosis but is significantly delayed at later stages of sporulation. A single gene, CWP1, was recovered as a multicopy suppressor of the spo1 null. CWP1 encodes a cell wall protein with a glycolipid moiety. We propose that, when modified by other lipases, this moiety may substitute for the product(s) of Spo1p lipase activity in meiosis. Based on the similarity of Spo1p to **phospholipase B** enzymes, its unique role in SPB duplication, and pleiotropic effects on MII, late gene expression and spore formation, we propose that the Spo1 protein participates in a novel meiotic pathway that functions through the SPB to coordinate nuclear division with spore development.

L8 ANSWER 3 OF 37 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2000026977 EMBASE
TITLE: Potential role of phospholipases in virulence and fungal pathogenesis.
AUTHOR: Ghannoum M.A.
CORPORATE SOURCE: M.A. Ghannoum, University Hospitals of Cleveland, Department of Dermatology, Case Western Reserve University, Cleveland, OH 44106-5028, United States. mag3@po.cwru.edu
SOURCE: Clinical Microbiology Reviews, (2000) 13/1 (122-143). Refs: 229
ISSN: 0893-8512 CODEN: CMIREX
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Microbial pathogens use a number of genetic strategies to invade the host and cause infection. These common themes are found throughout microbial systems. Secretion of enzymes, such as phospholipase, has been proposed as one of these themes that are used by bacteria, parasites, and pathogenic fungi. The role of extracellular phospholipase as a potential virulence factor in pathogenic fungi, including Candida albicans, Cryptococcus neoformans, and Aspergillus, has gained credence recently. In this review, data implicating phospholipase as a virulence factor in C. albicans, Candida glabrata, C. neoformans, and A. fumigatus are presented. A detailed description of the molecular and biochemical approaches used to more definitively delineate the role of phospholipase in the virulence of C. albicans is also covered. These approaches resulted in **cloning** of three genes encoding candidal phospholipases (caPLP1, caPLB2, and PLD).

By using targeted gene disruption, C. albicans null mutants that failed to

secrete **phospholipase B**, encoded by caPLB1, were constructed. When these isogenic strain pairs were tested in two clinically relevant murine models of candidiasis, deletion of caPLB1 was shown to lead to attenuation of candidal virulence. Importantly, immunogold electron microscopy studies showed that C. albicans secretes this enzyme during the infectious process. These data indicate that **phospholipase B** is essential for candidal virulence. Although the mechanism(s) through which phospholipase modulates fungal virulence is still under investigations, early data suggest that direct host cell damage and lysis are the main mechanisms contributing to fungal virulence. Since the importance of phospholipases in fungal virulence is already known, the next challenge will be to utilize these lytic enzymes as therapeutic and diagnostic targets.

L8 ANSWER 4 OF 37 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1999085322 EMBASE
TITLE: Molecular **cloning** of a second **phospholipase B** gene, caPLB2 from Candida albicans.
AUTHOR: Sugiyama Y.; Nakashima S.; Mirbod F.; Kanoh H.; Kitajima Y.; Ghannoum M.A.; Nozawa Y.
CORPORATE SOURCE: Y. Nozawa, Department of Biochemistry, Gifu University School of Medicine, Tsukasamachi-40, Gifu 500-8705, Japan. nozawa@cc.gifu-u.ac.jp
SOURCE: Medical Mycology, (1999) 37/1 (61-67).
Refs: 23
ISSN: 1369-3786 CODEN: MEMYFR
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Accumulating evidence suggests that **phospholipase B**, secreted by pathogenic fungi such as Candida albicans, Cryptococcus neoformans and Aspergillus fumigatus, functions as one of the virulence factors. In the present study, we have attempted to **clone phospholipase B** gene from C. albicans. By RT-PCR analysis with degenerate primers based on conserved regions of **phospholipase B** from Saccharomyces cerevisiae. Penicillium notatum and Torulaspora two similar but different cDNA fragments were obtained. One corresponded to the partial sequence of caPLB1, recently **cloned phospholipase B** gene from C. albicans by a different approach. The other fragments contained sequences similar to the corresponding sequences of **phospholipase B** from other fungi. The presence of two related genes was confirmed by Southern and Northern blot analyses. The full length of the second C. albicans **phospholipase B** gene (caPLB2) encoded a putative protein with 608 amino acids and contained a potential signal peptide sequence and a putative catalytic region, which are found in **phospholipase B** from other fungi. Consistent with the findings of caPLB1, caPLB2 also lacks a cluster of hydrophobic amino acids at the COOH-terminal, which may function as a signal of glycosylphosphatidylinositol anchor.

L8 ANSWER 5 OF 37 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1999016084 EMBASE
TITLE: Biochemical characterization and **cloning** of guinea pig intestinal **phospholipase B**.
AUTHOR: Delagebeaudeuf C.; Gassama-Diagne A.; Nauze M.; Ragab A.; Li R.Y.; Capdevielle J.; Ferrara P.; Fauvel J.; Chap H.
CORPORATE SOURCE: A. Gassama-Diagne, Inst Fed Recherche Immunol Cell Mol, Univ. Paul Sabatier INSERM Unite 326, Hopital Purpan, F31059 Toulouse Cedex, France.
Ama.Gassama@purpan.inserm.fr
SOURCE: Annals of the New York Academy of Sciences, (1998) 859/- (192-193).

Refs: 14
ISSN: 0077-8923 CODEN: ANYAA
COUNTRY: United States
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 029 Clinical Biochemistry
048 Gastroenterology
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Guinea pig **phospholipase B** (PLB) is an intestinal brush border glycoprotein displaying a calcium-independent phospholipase A2 (PLA2) and lysophospholipase activity. It has also been described as a monoacylglycerol and diacylglycerol lipase, indicating a broad substrate specificity. These data led to the obvious conclusion that PLB is involved in the digestion of various dietary lipids. PLB has been described in various microorganisms and in animal tissues. An enzyme similar to guinea pig intestinal PLB has been identified in rat and rabbit intestine, in the later case, the cDNA has been **cloned**. Guinea pig PLB is a 140-kDa glycoprotein located in the brush border of enterocyte. This microvillar membrane is endowed with a number of glycoproteins that are involved in the terminal steps of digestion of nutrients, and most of them have been characterized. One of the most posttranslational modifications of these integral proteins is glycosylation, and several studies have established that variation in their glycosylation pattern could occur during enterocyte differentiation and have effects on the structure, function, and intracellular transport of these proteins. In this context, we investigated the role of enzymatic removal of N-linked sugars on guinea pig intestinal PLB, and we isolated the cDNA for further characterization.

L8 ANSWER 6 OF 37 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1998353704 EMBASE
TITLE: **Cloning** and regulated expression of the Candida albicans **phospholipase B** (PLB1) gene.
AUTHOR: Hoover C.I.; Jantapour M.J.; Newport G.; Agabian N.; Fisher S.J.
CORPORATE SOURCE: C.I. Hoover, 604 Health Sciences West, University of California, San Francisco, CA 94143-0512, United States. hoover@socrates.ucsf.edu
SOURCE: FEMS Microbiology Letters, (1998) 167/2 (163-169).
Refs: 22
ISSN: 0378-1097 CODEN: FMLED7
PUBLISHER IDENT.: S 0378-1097(98)00383-8
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 022 Human Genetics
029 Clinical Biochemistry
004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Degenerate oligonucleotides (derived from conserved regions of PLB1 genes from S. cerevisiae and other fungi) were used to amplify PLB1 homolog fragments from C. albicans and C. tropicalis by using the polymerase chain reaction. The C. albicans PLB1 fragment was then used as a probe to clone the full-length gene and to monitor PLB1 mRNA expression. The C. albicans PLB1 gene consists of a 1815-bp open reading frame encoding a putative protein of 605 amino acids. It contains the highly conserved Gly-X-Ser-X-Gly catalytic motif, found in all lipolytic enzymes, and exhibits significant homology with other fungal PLB1 gene products (∼63% similarity, ∼45% identity). Blastospores and pseudohyphae expressed higher levels of PLB1 mRNA than germ-tube-forming cells. TUP1, a

general transcriptional repressor, may regulate PLB1 expression in C. albicans, since PLB1 expression was the highest in tup1.DELTA. mutants and did not vary in response to environmental stimuli. Together, these results suggest that expression of the C. albicans PLB1 gene is regulated as a function of morphogenic transition. Copyright (C) 1998 Federation of European Microbiological Societies.

L8 ANSWER 7 OF 37 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1998351030 EMBASE
TITLE: **Cloning** and disruption of caPLB1, a **phospholipase B** gene involved in the pathogenicity of Candida albicans.
AUTHOR: Leidich S.D.; Ibrahim A.S.; Fu Y.; Koul A.; Jessup C.; Vitullo J.; Fonzi W.; Mirbod F.; Nakashima S.; Nozawa Y.; Ghannoum M.A.
CORPORATE SOURCE: M.A. Ghannoum, Center for Medical Mycology, University Hospitals of Cleveland, 11100 Euclid Ave., Cleveland, OH 44106-5028, United States. mag3@po.cwru.edu
SOURCE: Journal of Biological Chemistry, (2 Oct 1998) 273/40 (26078-26086).
Refs: 53
ISSN: 0021-9258 CODEN: JBCHA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The Candida albicans PLB1 gene was **cloned** using a polymerase chain reaction-based approach relying on degenerate oligonucleotide primers designed according to the amino acid sequences of two peptide fragments obtained from a purified candidal enzyme displaying phospholipase activity (Mirbod, F., Banno, Y., Ghannoum, M. A., Ibrahim, A. S., Nakashima, S., Yasuo, K., Cole, G.T., and Nozawa, Y. (1995) Biochim. Biophys. Acta 1257, 181-188). Sequence analysis of a 6.7-kilobase pair EcoRI-ClaI genomic **clone** revealed a single open reading frame of 1818 base pairs that predicts for a preprotein of 605 residues. Comparison of the putative candidal phospholipase with those of other proteins in data base revealed significant homology to known fungal phospholipase Bs from Saccharomyces cerevisiae (45%), Penicillium notatum (42%), Torulaspora delbrueckii (48%), and Schizosaccharomyces pombe (38%).
Thus, we have **cloned** the gene encoding a C. albicans **phospholipase B** homolog. This gene, designated caPLB1, was mapped to chromosome 6. Disruption experiments revealed that the caplb1 null mutant is viable and displays no obvious phenotype. However, the virulence of strains deleted for caPLB1, as assessed in a murine model for hematogenously disseminated candidiasis, was significantly attenuated compared with the isogenic wild-type parental strain. Although deletion of caPLB1 did not produce any detectable effects on candidal adherence to human endothelial or epithelial cells, the ability of the caplb1 null mutant to penetrate host cells was dramatically reduced. Thus, **phospholipase B** may well contribute to the pathogenicity of C. albicans by abetting the fungus in damaging and traversing host cell membranes, processes which likely increase the rapidity of disseminated infection.

L8 ANSWER 8 OF 37 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1998048010 EMBASE
TITLE: Identification of functional domains of rat intestinal **phospholipase B**/lipase: It's cDNA

cloning, expression, and tissue distribution.
AUTHOR: Takemori H.; Zolotaryovt F.N.; Ting L.; Urbaidn T.; Komatsubarat T.; Hatanos O.; Okamoto M.; Tojo H.
CORPORATE SOURCE: H. Tojo, Dept. of Molec. Physiological Chem., Osaka University Medical School, 2-2 Yamadaoka, Osaka 565, Japan.
htojo@mr-mbio.med.osaka-u.ac.jp
SOURCE: Journal of Biological Chemistry, (1998) 273/4 (2222-2231).
Refs: 33
ISSN: 0021-9258 CODEN: JBCHA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB A cDNA encoding a rat intestinal Ca2+-independent **phospholipase B**/lipase (PLB/LIP) was **cloned** from an ileac mucosa cDNA library using a probe amplified by polymerase chain reaction based on the purified enzyme's sequence. PLB/LIP consists of an NH2-terminal signal peptide, four tandem repeats of about 350 amino acids each, and a hydrophobic domain near the COOH terminus. The enzyme purified previously was found to be derived from the second repeat part. To examine the function of each domain, the full-length PLB/LIP, individual repeats, and a protein lacking the COOH-terminal hydrophobic stretch were expressed in COS-7 cells. The results showed that the second repeat, but not the other repeats, had all the activities (phospholipase A2, lysophospholipase, and lipase) found in the purified natural and expressed full-length enzymes, suggesting repeat 2 is a catalytic domain. The full-length enzyme was mainly present in membrane fractions and efficiently solubilized by treatment with 1% Triton X-100, but not with phosphatidylinositol-specific phospholipase C. Deletion of the COOH-terminal hydrophobic stretch caused the secretion of >90% of synthesized PLB/LIP into culture media. These results suggest the hydrophobic domain is not replaced by a glycosylphosphatidylinositol anchor but serves as a membrane anchor directly. A message of the full-length PLB/LIP was abundantly expressed in the ileum and also, in a smaller, but significant amount, in the esophagus and testis. Immunohistochemistry showed that PLB/LIP is localized in brush border membranes of the absorptive cells, Paneth cells, and acrosomes of spermatid, suggesting its roles related and unrelated to intestinal digestion.

L8 ANSWER 9 OF 37 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1998048009 EMBASE
TITLE: Purification and characterization of a catalytic domain of rat intestinal phospholipase B/lipase associated with brush border membranes.
AUTHOR: Tojo H.; Ichida T.; Okamoto M.
CORPORATE SOURCE: H. Tojo, Dept. of Molec. Physiological Chem., Osaka University Medical School, 2-2 Yamadaoka, Osaka 565, Japan.
htoji@mr-mbio.med.osaka-u.ac.jp
SOURCE: Journal of Biological Chemistry, (1998) 273/4 (2214-2221).
Refs: 53
ISSN: 0021-9258 CODEN: JBCHA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB A brush border membrane-associated **phospholipase B**/lipase was solubilized from the distal two-thirds of rat small intestine

by autolysis during storage at -35 .degree.C over 1 month, and then the enzyme was purified to homogeneity and characterized enzymatically and structurally. The purified enzyme exhibited broad substrate specificity including esterase, phospholipase A2, lysophospholipase, and lipase activities. SDS-gel electrophoretic and reverse-phase high performance liquid chromatographic analyses demonstrated that a single enzyme catalyzes these activities. It preferred hydrolysis at the sn-2 position of diacylphospholipid and diacylglycerol without strict stereoselectivity, whereas it apparently exhibited no positional specificity toward triacylglycerol. Diisopropyl fluorophosphate, an irreversible inhibitor of serine esterases and lipases, inhibited purified enzyme. When the position of enzyme on SDS-gel electrophoresis under the non-reducing conditions was determined by assaying the activity eluted from sliced gels, brush border membrane-associated enzyme corresponded to a .apprx.150-kDa protein; autolysis gave a 35-kDa product, in agreement with the results of immunoblot analysis. The purified 35-kDa enzyme consisted of a 14-kDa peptide and a glycosylated 21-kDa peptide. Their NH2- terminal amino acid sequences were determined and found in the second repeat of 161-kDa **phospholipase B**/lipase with 4-fold tandem repeats of .apprx.38 kDa each, which we **cloned** and sequenced in the accompanying paper (Takemori, H., Zolotaryov, F., Ting, L., Urbain, T., Komatsubara, T., Hatano, O., Okamoto, M., and Tojo, H. (1998) J. BioL Chem. 273, 2222-2231). These results indicate that the purified enzyme is the catalytic domain derived from the second repeat of brush border membrane-associated **phospholipase B**/lipase.

L8 ANSWER 10 OF 37 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 96337096 EMBASE
DOCUMENT NUMBER: 1996337096
TITLE: The SPO1 gene product required for meiosis in yeast has a high similarity to phospholipase B enzymes.
AUTHOR: Tevzadze G.G.; Mushegian A.R.; Esposito R.E.
CORPORATE SOURCE: Dept Molecular Genetics Cell Biology, University of Chicago, 920 E. 58th street,Chicago, IL 60637, United States
SOURCE: Gene, (1996) 177/1-2 (253-255).
ISSN: 0378-1119 CODEN: GENED6
PUBLISHER IDENT.: S 0378-1119(96)00261-2
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
022 Human Genetics
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The SPO1 gene of Saccharomyces cerevisiae has been **cloned** and sequenced. The Spo1 protein reveals significant similarity with fungal **phospholipase B** (PLB) enzymes. Features of the SPO1 gene sequence are presented.

L8 ANSWER 11 OF 37 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 94339120 EMBASE
DOCUMENT NUMBER: 1994339120
TITLE: **Cloning** and sequencing of **phospholipase**]**B** gene from the yeast Torulaspora delbrueckii.
AUTHOR: Watanabe Y.; Yashiki Y.; Nurun-Nahar Sultana G.; Maruyama M.; Kangawa K.; Tamai Y.
CORPORATE SOURCE: Department Biological Resources, Faculty of Agriculture, Ehime University, 3-5-7 Tarumi,Matsuyama, Ehime 790, Japan
SOURCE: FEMS Microbiology Letters, (1994) 124/1 (29-34).
ISSN: 0378-1097 CODEN: FMLED7
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English

AB The extracellular **phospholipase B** gene from baker's yeast Torulaspora delbrueckii was **cloned** and sequenced. Analysis of DNA sequence data revealed an open reading frame (ORF) encoding a 649-amino acid protein, that included amino acid sequences obtained from the purified enzyme. Comparison of these sequence data with the N-terminal amino acid sequence of the enzyme indicated that this secreted protein is synthesized as a large precursor with a 21-amino acid N-terminal extension to the mature enzyme of 628 amino acids. A homology search was carried out between **phospholipase B** from 7. delbrueckii and Penicillium notatum. The deduced amino acid sequence of the **cloned phospholipase B** was homologous (about 50% identity) to **phospholipase B** from P. notatum, and contained six conserved regions. The transcriptional level of the **phospholipase B** gene in different growth phases of the cells was investigated by Northern blot analysis. The level of mRNA of the **phospholipase B** gene was higher in the cells from early exponential and stationary phases.

L8 ANSWER 12 OF 37 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 92037825 EMBASE
DOCUMENT NUMBER: 1992037825
TITLE: Primary structure of protein moiety of Penicillium notatum phospholipase B deduced from the cDNA.
AUTHOR: Masuda N.; Kitamura N.; Saito K.
CORPORATE SOURCE: Department Medical Chemistry, Kansai Medical School,Moriguchi, Osaka 570, Japan
SOURCE: European Journal of Biochemistry, (1991) 202/3 (783-787). ISSN: 0014-2956 CODEN: EJBCAI
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English

AB **Phospholipase B** has not yet been well defined. The most important points about this enzyme are its relationships with lysophospholipase and phospholipase A1. As reported [Saito, K., Sugatani, J. and Okumura, T. (1991) Methods Enzymol. 197, 446-456], Penicillium notatum **phospholipase B** is a glycoprotein with a molecular mass of 95 kDa and intrinsic lysophospholipase and **phospholipase B** activities; however, by endogenous proteolytic modification, its **phospholipase B** activity is almost completely, whereas its lysophospholipase activity remains unchanged. A cDNA library of P. notatum was screened by hybridization with two synthetic oligodeoxyribonucleotide probes, which corresponds to two different pentapeptides of the enzyme. A hybridization-positive **clone**, pPBL18, was isolated and its nucleotide sequence was determined. The deduced amino acid sequence was quite different from that found previously. Therefore, we rescreened the cDNA library with a Sau3AI fragment derived from pPLB18 and isolated a new **clone**, pPLB15. Comparison of the nucleotide sequences of pPLB15 and pPBL18 revealed that pPLB18 contained an insertion sequence of 53 bp. Consequently, the reading frame was open downstream for 603 amino acid residues. From the assigned sequence, it was deduced that the limited proteolysis occurred between Leu175 and Asp176; eight cysteine residues and 16 potential N-glycosylation sites were also found. No amino acid sequence similarity was found with other proteins, including other phospholipases.

L8 ANSWER 13 OF 37 BIOSIS COPYRIGHT 2001 BIOSIS

ACCESSION NUMBER: 2000:400911 BIOSIS
DOCUMENT NUMBER: PREV200000400911
TITLE: Phospholipase B is a virulence factor for Cryptococcus neoformans.
AUTHOR(S): Cox, G. M. (1); McDade, H. C. (1); Gottfredsson, M. (1); Chen, S. C. A.; Wright, L. C.; Sorrell, T. C.; Ghannoum, M.
A.; Perfect, J. R. (1)
CORPORATE SOURCE: (1) Duke University Medical Center, Durham, NC USA
SOURCE: Abstracts of the General Meeting of the American Society for Microbiology, (2000) Vol. 100, pp. 322. print.
Meeting Info.: 100th General Meeting of the American Society for Microbiology Los Angeles, California, USA May 21-25, 2000 American Society for Microbiology
. ISSN: 1060-2011.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 14 OF 37 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1999:236212 BIOSIS
DOCUMENT NUMBER: PREV199900236212
TITLE: Purification and characterization of **phospholipase B** from Kluyveromyces lactis, and **cloning** of **phospholipase B** gene.
AUTHOR(S): Oishi, Hideki; Morimoto, Takahiro; Watanabe, Yasuo; Tamai, Youichi (1)
CORPORATE SOURCE: (1) Department of Bioresources, Faculty of Agriculture, Ehime University, Matsuyama, Ehime, 790-8566 Japan
SOURCE: Bioscience Biotechnology and Biochemistry, (Jan., 1999) Vol. 63, No. 1, pp. 83-90.
ISSN: 0916-8451.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Phospholipase B (PLB) from the yeast Kluyveromyces lactis was purified to homogeneity from culture medium. The enzyme was highly glycosylated with apparent molecular mass of 160-250 kDa, and had two pH optima, at pH 2.0 and pH 7.5. At acidic pH the enzyme hydrolyzed all phospholipid substrates tested here without metal ion. On the other hand, at alkaline pH the enzyme showed substrate specificity for phosphatidylcholine and lysophosphatidylcholine and required Ca2+, Fe3+, or Al3+ for the activity. The alkaline activity was increased more than 20-fold in the presence of Al3+ compared to that in the presence of Ca2+. cDNA sequence of PLB (KlPLB) was analyzed by a combination of several PCR procedures. KlPLB encoded a protein consist of 640 amino acids and the deduced amino acid sequence showed 66.7% similarity with the T. delbrueckii PLB. The amino acid sequence contained the lipase consensus sequence (G-X-S-X-G) and the catalytic aspartic acid motif. Replacement of Arg-112 or Asp-406 with alanine caused loss of the enzymatic activity at both pH. These results suggested that PLB activity are dependent on a catalytic mechanism similar to that of cytosolic phospholipase A2.

L8 ANSWER 15 OF 37 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1999:153811 BIOSIS
DOCUMENT NUMBER: PREV199900153811
TITLE: Biochemical characterization and **cloning** of guinea pig intestinal **phospholipase B**.
AUTHOR(S): Delagebeaudeuf, C.; Gassama-Diagne, A. (1); Nauze, M.; Ragab, A.; Li, R. Y.; Capdevielle, J.; Ferrara, P.; Fauvel, J.; Chap, H.
CORPORATE SOURCE: (1) Inst. Fed. Rech. Immunol. Cell. et Mol., Univ. Paul

Sabatier, F-31059 Toulouse Cedex France
SOURCE: Wiedenmann, B. [Editor]; Rosewicz, S. [Editor]; Zeitz, M. [Editor]; Riecken, E. O. [Editor]. Annals of the New York Academy of Sciences, (Nov. 17, 1998) Vol. 859, pp. 192-193.
Annals of the New York Academy of Sciences; Intestinal plasticity in health and disease.
Publisher: New York Academy of Sciences 2 East 63rd Street,
New York, New York 10021, USA.
Meeting Info.: Conference Berlin, Germany October 15-18, 1997
ISSN: 0077-8923. ISBN: 1-57331-152-9 (paper), 1-57331-151-0 (cloth).
DOCUMENT TYPE: Book; Conference
LANGUAGE: English

L8 ANSWER 16 OF 37 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1998:416799 BIOSIS
DOCUMENT NUMBER: PREV199800416799
TITLE: Molecular **cloning** of the Cryptococcus neoformans **phospholipase B** gene, a putative virulence factor.
AUTHOR(S): Gottfredsson, M. (1); Cox, G. M.; Ghannoum, M.; Perfect, J. R.
CORPORATE SOURCE: (1) Duke Univ. Med. Ctr., Durham, NC USA
SOURCE: Abstracts of the General Meeting of the American Society for Microbiology, (1998) Vol. 98, pp. 265.
Meeting Info.: 98th General Meeting of the American Society for Microbiology Atlanta, Georgia, USA May 17-21, 1998
American Society for Microbiology
. ISSN: 1060-2011.
DOCUMENT TYPE: Conference
LANGUAGE: English

L8 ANSWER 17 OF 37 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1997:421684 BIOSIS
DOCUMENT NUMBER: PREV199799720887
TITLE: Purification of **phospholipase B** from Mycobacterium lepraemurium and **cloning** of the gene.
AUTHOR(S): Maeda, S.; Nakata, N.; Kai, M.; Kashiwabara, Y.
CORPORATE SOURCE: Leprosy Res. Cent., Natl. Inst. Infectious Diseases, Higashimurayama, Tokyo Japan
SOURCE: FASEB Journal, (1997) Vol. 11, No. 9, pp. A1270.
Meeting Info.: 17th International Congress of Biochemistry and Molecular Biology in conjunction with the Annual Meeting of the American Society for Biochemistry and Molecular Biology San Francisco, California, USA August 24-29, 1997
ISSN: 0892-6638.
DOCUMENT TYPE: Conference; Abstract
LANGUAGE: English

L8 ANSWER 18 OF 37 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1997:115886 BIOSIS
DOCUMENT NUMBER: PREV199799415089
TITLE: Properties of phospholipase B from the yeast Torulaspora delbrueckii and its physiological effects on the durability of the yeast: Review.
AUTHOR(S): Tamai, Youichi (1); Watanabe, Yasuo
CORPORATE SOURCE: (1) Dep. Bioresour., Fac. Agric., Ehime Univ., Matsuyama,

Ehime 790 Japan
SOURCE: Seibutsu-Kogaku Kaishi, (1996) Vol. 74, No. 6, pp. 457-468.
ISSN: 0919-3758.
DOCUMENT TYPE: Article
LANGUAGE: Japanese
SUMMARY LANGUAGE: Japanese; English

AB Phospholipid deacylating enzymes of yeast have been studied primarily in Saccharomyces cerevisiae, a baker's yeast, and Candida albicans, a pathogenic yeast. In recent years, the genes of S. cerevisiae and Torulaspora delbrueckii have been cloned, providing detailed data on the physiological roles, structure, and activity of these enzymes in yeast. We report here on the results of our study on phospholipid deacylating enzymes, mainly the enzyme derived from T. delbrueckii, and discuss the physiological role of this enzyme in the cells of this yeast.

L8 ANSWER 19 OF 37 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 2000:940711 SCISEARCH
THE GENUINE ARTICLE: 380FC
TITLE: Secreted lipases of Candida albicans: cloning, characterisation and expression analysis of a new gene family with at least ten members
AUTHOR: Hube B (Reprint); Stehr F; Bossenz M; Mazur A; Kretschmar M; Schafer W
CORPORATE SOURCE: ROBERT KOCH INST, NG4, NORDUFER 20, D-13353 BERLIN, GERMANY (Reprint); UNIV HAMBURG, INST ALLGEMEINE BOT, D-22609 HAMBURG, GERMANY; KLINIKUM MANNHEIM, INST MED MIKROBIOL & HYG, D-68135 MANNHEIM, GERMANY
COUNTRY OF AUTHOR: GERMANY
SOURCE: ARCHIVES OF MICROBIOLOGY, (NOV 2000) Vol. 174, No. 5, pp. 362-374.
Publisher: SPRINGER-VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010.
ISSN: 0302-8933.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 56

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Extracellular lipolytic activity enabled the human pathogen Candida albicans to grow on lipids as the sole source of carbon. Nine new members of a lipase gene family (LIP2-LIP10) with high similarities to the recently cloned lipase gene LIP1 were cloned and characterised. The ORFs of all ten lipase genes are between 1281 and 1416 bp long and encode highly similar proteins with up to 80% identical amino acid sequences. Each deduced lipase sequence has conserved lipase motifs, four conserved cysteine residues, conserved putative N-glycosylation sites and similar hydrophobicity profiles. All LIP genes, except LIP7, also encode an N-terminal signal sequence. LIP3-LIP6 were expressed in all media and at all time points of growth tested as shown by Northern blot and RT-PCR analyses. LIP1, LIP3, LIP4, LIP5, LIP6 and LIP8 were expressed in medium with Tween 40 as a sole source of carbon. However, the same genes were also expressed in media without lipids. Two other genes, LIP2 and LIP9, were only expressed in media lacking lipids. Transcripts of most lipase genes were detected during the yeast-to-hyphal transition. Furthermore, LIP5, LIP6, LIP8 and LIP9 were found to be expressed during experimental infection of mice. These data indicate lipid-independent, highly flexible in vitro and in vivo expression of a large number of LIP genes, possible reflecting broad lipolytic activity, which may contribute to the persistence and virulence of C. albicans in human tissue.

L8 ANSWER 20 OF 37 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 1998:407885 SCISEARCH
THE GENUINE ARTICLE: ZK302
TITLE: Purification of **phospholipase B** from

Mycobacterium lepraemurium and **cloning** of the gene.
AUTHOR: Maeda S (Reprint); Nakata N; Kai M; Kashiwabara Y
CORPORATE SOURCE: NATL INST INFECT DIS, LEPROSY RES CTR, TOKYO, JAPAN
COUNTRY OF AUTHOR: JAPAN
SOURCE: FASEB JOURNAL, (31 JUL 1997) Vol. 11, No. 9, Supp. [S], pp. 2419-2419.
Publisher: FEDERATION AMER SOC EXP BIOL, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814-3998.
ISSN: 0892-6638.
DOCUMENT TYPE: Conference; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 0

L8 ANSWER 21 OF 37 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 96:780233 SCISEARCH
THE GENUINE ARTICLE: VN246
TITLE: **CLONING** AND EXPRESSION OF CANDIDA-ALBICANS EXTRACELLULAR **PHOSPHOLIPASE-B**
AUTHOR: IBRAHIM A S (Reprint); FU Y; FONZI W; ZHOU X; MIRBOD F; NOZAWA Y; GHANNOUM M A
CORPORATE SOURCE: HARBOR UCLA MED CTR, TORRANCE, CA, 90509; GEORGETOWN UNIV,
SCH MED, WASHINGTON, DC, 20007; GIFU UNIV, SCH MED, GIFU 500, JAPAN
COUNTRY OF AUTHOR: USA; JAPAN
SOURCE: CLINICAL INFECTIOUS DISEASES, (OCT 1996) Vol. 23, No. 4, pp. 220.
ISSN: 1058-4838.
DOCUMENT TYPE: Conference; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: ENGLISH
REFERENCE COUNT: No References

L8 ANSWER 22 OF 37 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:802341 CAPLUS
DOCUMENT NUMBER: 133:345609
TITLE: Phospholipase B and its gene from Aspergillus oryzae for use in improving stability and decreasing stickiness of dough in baking
INVENTOR(S): Harris, Paul; Brown, Kimberly M.
PATENT ASSIGNEE(S): Novo Nordisk Biotech, Inc., USA
SOURCE: U.S., 24 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6146869	A	20001114	US 1999-426072	19991021

AB The present invention relates to isolated polypeptides having phospholipase B activity and isolated nucleic acid sequences encoding the polypeptides from Aspergillus oryzae HowB430. The invention also relates to nucleic acid constructs, vectors, and host cells comprising the nucleic acid sequences as well as methods for producing and using the polypeptides. Thermostability and other properties of this phospholipase B suggest it may be useful in increasing stability and decreasing stickiness of dough in the prepn. of bakery products.
REFERENCE COUNT: 5
REFERENCE(S): (1) Leidich; J Biol Chem 1998, V273(40), P26078 CAPLUS
(2) Masuda; Eur J Biochem 1991, V202, P783 CAPLUS

(3) Masuda; Eur J Biochem 1998, V202, P783
(4) Memon; FEMS Microbiology Letters 1983, V18, P15 CAPLUS
(5) Sugiyama; Nedical Mycology 1998, V37, P61

L8 ANSWER 23 OF 37 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:655910 CAPLUS
DOCUMENT NUMBER: 131:283329
TITLE: Cloning, sequence and therapeutic applications of human lysophospholipase
INVENTOR(S): Hillman, Jennifer L.; Shah, Purvi; Murry, Lynn E.
PATENT ASSIGNEE(S): Incyte Pharmaceuticals, Inc., USA
SOURCE: U.S., 32 pp., Cont.-in-part of U.S. Ser. No. 844,120.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5965423	A	19991012	US 1998-22940	19980212
US 5858756	A	19990112	US 1997-844120	19970429
AU 9871720	A1	19981124	AU 1998-71720	19980428
WO 9849319	A1	19981105	WO 1998-US8782	19980429
W: AT, AU, BR, CA, CH, CN, DE, DK, ES, FI, GB, IL, JP, KZ, MX, NO, NZ, RU, SE, SG, US, US, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
EP 979289	A1	20000216	EP 1998-918886	19980429
R: BE, DE, ES, FR, GB, IT, NL				
US 6093561	A	20000725	US 1998-216386	19981218
PRIORITY APPLN. INFO.:			US 1997-844120	19970429
			US 1998-22940	19980212
			WO 1998-US8782	19980429

AB The invention provides a human lysophospholipase (NHLP) and polynucleotides which identify and encode NHLP. Nucleic acids encoding NHLP were identified in Incyte clones 2676650 and 2135151 from a cDNA library using a computer search for amino acid sequence alignments. The invention also provides expression vectors, host cells, antibodies, agonists, and antagonists. The invention also provides methods for treating or preventing disorders assocd. with expression of NHLP.
REFERENCE COUNT: 8
REFERENCE(S): (1) Anderson, R; Toxicol Appl Pharmacol 1994, V125, P176 CAPLUS
(3) Selle, H; Eur J Biochem 1993, V212, P411 CAPLUS
(5) Sugimoto, H; J Biol Chem 1994, V269, P6252 CAPLUS
(6) Sugimoto, H; J Biol Chem 1996, V271, P7705 CAPLUS
(8) Wang, A; J Biol Chem 1997, V272(19), P12723 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 24 OF 37 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:141803 CAPLUS
DOCUMENT NUMBER: 131:15642
TITLE: A specific human lysophospholipase: cDNA cloning, tissue distribution and kinetic characterization
AUTHOR(S): Wang, Aijun; Yang, Hsiu-Chiung; Friedman, Peter; Johnson, Christina A.; Dennis, Edward A.
CORPORATE SOURCE: Department of Chemistry and Biochemistry, University of California at San Diego, La Jolla, CA, 92093-0601, USA
SOURCE: Biochim. Biophys. Acta (1999), 1437(2), 157-169
CODEN: BBACAQ; ISSN: 0006-3002
PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal
LANGUAGE: English

AB Lysophospholipases are crit. enzymes that act on biol. membranes to regulate the multifunctional lysophospholipids; increased levels of lysophospholipids are assocd. with a host of diseases. Herein we report the cDNA cloning of a human brain 25 kDa lysophospholipid-specific lysophospholipase (hLysoPLA). The enzyme (at both mRNA and protein levels) is widely distributed in tissues, but with quite different abundances. The hLysoPLA hydrolyzes lysophosphatidylcholine in both monomeric and micellar forms, and exhibits apparent cooperativity and surface diln. kinetics, but not interfacial activation. Detailed kinetic anal. indicates that the hLysoPLA binds first to the micellar surface and then to the substrate presented on the surface. The kinetic parameters assocd. with this surface diln. kinetic model are reported, and it is concluded that hLysoPLA has a single substrate binding site and a surface recognition site. The apparent cooperativity obsd. is likely due to the change of substrate presentation. In contrast to many non-specific lipolytic enzymes that exhibit lysophospholipase activity, hLysoPLA hydrolyzes only lysophospholipids and has no other significant enzymic activity. Of special interest, hLysoPLA does not act on plasmenylcholine.

Of the several inhibitors tested, only Me arachidonyl fluorophosphonate (MAFP) potently and irreversibly inhibits the enzymic activity. The inhibition by MAFP is consistent with the catalytic mechanism proposed for the enzyme - a serine hydrolase with a catalytic triad composed of Ser-119, Asp-174 and His-208.

REFERENCE COUNT: 61
REFERENCE(S):
(1) Ackermann, E; J Biol Chem 1995, V270, P445 CAPLUS
(2) An, S; J Biol Chem 1998, V273, P7906 CAPLUS
(3) Ares, M; Arterioscler Thromb Vasc Biol 1995, V15, P1584 CAPLUS
(4) Balsinde, J; J Biol Chem 1996, V271, P6758 CAPLUS
(6) Chen, L; J Lipid Res 1997, V38, P546 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 25 OF 37 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:9938 CAPLUS
DOCUMENT NUMBER: 130:77962
TITLE: sequence and therapeutic applications for human lysophospholipase involving treatment for inflammation
INVENTOR(S): Hillman, Jennifer L.; Shah, Purvi; Corley, Neil C.; Murry, Lynn E.
PATENT ASSIGNEE(S): Incyte Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9858066	A1	19981223	WO 1998-US12624	19980619
W: AT, AU, BR, CA, CH, CN, DE, DK, IL, JP, KR, MX, NO, NZ, RU, SE, SG, US, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6143544	A	20001107	US 1997-878862	19970619
AU 9879747	A1	19990104	AU 1998-79747	19980619
EP 990038	A1	20000405	EP 1998-930333	19980619
R: BE, DE, ES, FR, GB, IT, NL				
US 6004792	A	19991221	US 1998-216001	19981217
PRIORITY APPLN. INFO.:			US 1997-878862	19970619

WO 1998-US12624 19980619

AB The invention provides a new human lysophospholipase (IHLP) and polynucleotides which identify and encode IHLP. The invention also provides expression vectors, host cells, agonists, antibodies and antagonists. The invention also provides methods for treating inflammation and disorders assocd. with expression of IHLP.

REFERENCE COUNT: 4

REFERENCE(S):
(1) Garsetti, D; Biochem J 1992, V288, P831 CAPLUS
(2) National Cancer Institute; Homo sapiens cDNA clone IMAGE: 746208 5' similar to WP: K04G2 5 CE06099 Esterase 1997
(3) Sugimoto, H; Journal of Biological Chemistry 1996, V271(13), P7705 CAPLUS
(4) Wang, A; Journal of Biological Chemistry 1997, V272(19), P12723 CAPLUS

L8 ANSWER 26 OF 37 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:728575 CAPLUS
DOCUMENT NUMBER: 130:1773
TITLE: sequence and therapeutic applications of Human lysophospholipase
INVENTOR(S): Hillman, Jennifer L.; Shah, Purvi; Murry, Lynn E.
PATENT ASSIGNEE(S): Incyte Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9849319	A1	19981105	WO 1998-US8782	19980429
W: AT, AU, BR, CA, CH, CN, DE, DK, ES, FI, GB, IL, JP, KZ, MX, NO, NZ, RU, SE, SG, US, US, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5858756	A	19990112	US 1997-844120	19970429
US 5965423	A	19991012	US 1998-22940	19980212
AU 9871720	A1	19981124	AU 1998-71720	19980428
EP 979289	A1	20000216	EP 1998-918886	19980429
R: BE, DE, ES, FR, GB, IT, NL				
PRIORITY APPLN. INFO.:			US 1997-844120	19970429
			US 1998-22940	19980212
			WO 1998-US8782	19980429

AB The invention provides a human lysophospholipase (NHLP) and polynucleotides which identify and encode NHLP. The invention also provides expression vectors, host cells, antibodies, agonists, and antagonists. The invention also provides methods for treating or preventing disorders assocd. with expression of NHLP.

REFERENCE COUNT: 4

REFERENCE(S):
(1) National Cancer Institute; DATABASE EMBL 1997
(2) Sugimoto, H; JOURNAL OF BIOLOGICAL CHEMISTRY 1996, V271(13), P7705 CAPLUS
(3) Wang, A; DATABASE EMBL 1997
(4) Wang, A; JOURNAL OF BIOLOGICAL CHEMISTRY 1997, V272(19), P12723 CAPLUS

L8 ANSWER 27 OF 37 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:434488 CAPLUS
DOCUMENT NUMBER: 129:212240
TITLE: cDNA cloning and expression of a novel family of

enzymes with calcium-independent phospholipase A2 and lysophospholipase activities

AUTHOR(S): Portilla, Didier; Crew, Mark D.; Grant, David; Serrero, Ginette; Bates, Linda M.; Dai, Gonghe; Sasner, Michael; Cheng, Jun; Buonanno, Andres

CORPORATE SOURCE: Department of Internal Medicine, University of Arkansas for Medical Sciences, Little Rock, AR, 72205-7199, USA

SOURCE: J. Am. Soc. Nephrol. (1998), 9(7), 1178-1186
CODEN: JASNEU; ISSN: 1046-6673

PUBLISHER: Williams & Wilkins

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Previous studies have suggested that activation of calcium-independent PLA2 (CaIPLA2) is an early event in cell death after hypoxic injury in proximal tubule cells. An approx. 28-kD CaIPLA2 with preferential activity toward plasmalogen phospholipids has been recently purified from rabbit kidney cortex (D. Portilla and G. Dai, J Biol Chem 271, 15451-15457, 1996). Their report describes the cloning of a full-length rat cDNA encoding CaIPLA2, using sequences derived from the purified rabbit kidney cortex enzyme. In addn., cDNA from rabbit kidney that encode the rabbit homolog of the enzyme and a closely related isoform were isolated. The rat cDNA is predicted to encode an approx. 24-kD protein, and each cDNA contains the sequence G-F-S-Q-G, which fits the active site consensus sequence G-X-S-X-G of carboxylesterases. Several lines of evidence (DNA sequence comparison, Southern blot anal., and examn. of the expressed sequence tag database) show that CaIPLA2 enzymes are encoded by a multigene family in rats, mice, rabbits, and humans. Northern anal. of various tissues from the rat indicated that the CaIPLA2 gene is ubiquitously expressed, with highest mRNA abundance obsd. in the kidney and small intestine. The rat CaIPLA2 cDNA, when expressed in a baculovirus expression system, and the purified rabbit kidney cortex protein exhibit both CaIPLA2 and lysophospholipase activities. The cloned CaIPLA2 cDNA are expected to aid in understanding the role of CaIPLA2 in cell death after hypoxic/ischemic cell injury.

L8 ANSWER 28 OF 37 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:425549 CAPLUS

DOCUMENT NUMBER: 129:65254

TITLE: Extracellular phospholipases as universal virulence factor in pathogenic fungi

AUTHOR(S): Ghannoum, Mahmoud A.

CORPORATE SOURCE: Center for Medical Mycology, Mycology Reference Laboratory, Case Western Reserve University, Cleveland, OH, USA

SOURCE: Nippon Ishinkin Gakkai Zasshi (1998), 39(2), 55-59
CODEN: NIGZE4; ISSN: 0916-4804

PUBLISHER: Nippon Ishinkin Gakkai

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review with 19 refs. Microbial pathogens use a no. of genetic strategies to invade the host and cause infection. These common themes are found throughout microbial virulence factors. Secretion of enzymes, such as phospholipase, has been proposed as one of these themes which is used by bacteria, parasite, and pathogenic fungi. The role of extracellular phospholipase as a potential virulence factor in pathogenic fungi, including Candida albicans, Cryptococcus neoformans and Aspergillus has gained credence recently. In this address data implicating phospholipase as a virulence factor in Cryptococcus neoformans and Aspergillus fumigatus will be presented. This will be followed by a more detailed description of our mol. and biochem. approaches that were used to more definitively delineate the role of phospholipase in the virulence of

C. albicans. First, we purified the **phospholipase B** protein, the dominant phospholipase secreted by C. albicans, obtained the amino acid sequence of its N-terminus and in internal peptide fragment, and used this information to **clone** the gene encoding the protein using a PCR-based approach. Nucleotide sequence anal. revealed an ORF of 1818 bp that predicted for a pre-protein of 605 amino acid residues. The deduced amino acid sequences of the **cloned** gene (PLB1) showed 42.3%, 45%, and 47.8% overall sequence identity, with the reported sequences of **phospholipase B cloned** from Penicillium notatum, Saccharomyces cerevisiae, and Saccharomyces rosei, resp. Second, using targeted gene disruption, URA blaster, we created C. albicans null mutants which failed to secrete **phospholipase B**. Third, we tested the ability of these isogenic strain pairs to cause lethality using a murine model of hematogenously disseminated candidiasis. Our data demonstrate that the parent phospholipase-producing strain caused more fatality in mice, while the null phospholipase-deficient strain was avirulent. Importantly, the parent and null mutants had similar growth and germination rates. These data prove that **phospholipase B** is essential for candidal virulence, and pave the way for studies directed at detg. the mechanism/s through which phospholipase modulate candidal virulence. Understanding phospholipase as a common theme in fungal pathogenicity is crit. for developing new antifungal strategies based on anti-virulence.

L8 ANSWER 29 OF 37 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1998:330388 CAPLUS
DOCUMENT NUMBER: 129:92222
TITLE: Cloning and expression of cDNA encoding rat liver 60-kDa lysophospholipase containing an asparaginase-like region and ankyrin repeat
AUTHOR(S): Sugimoto, Hiroyuki; Odani, Shoji; Yamashita, Satoshi
CORPORATE SOURCE: Department of Biochemistry, Gunma University School of Medicine, Maebashi, 371-8511, Japan
SOURCE: J. Biol. Chem. (1998), 273(20), 12536-12542
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Mammalian tissues contain small form and large form lysophospholipases. Here we report the cloning, sequence, and expression of cDNA encoding the latter form of lysophospholipase using antibody raised against the enzyme purified from rat liver supernatant (Sugimoto, H., and Yamashita, S. (1994) J. Biol. Chem. 269, 6252-6258). The 2,539-base pair cDNA encoded 564 amino acid residues with a calcd. Mr of 60,794. The amino-terminal two-thirds of the deduced amino acid sequence significantly resembled Escherichia coli asparaginase I with the putative asparaginase catalytic triad Thr-Asp-Lys and was followed by leucine zipper motif. The carboxyl-terminal region carried ankyrin repeat. When the cDNA was transfected into HEK293 cells, not only lysophospholipase activity but also asparaginase and platelet-activating factor acetylhydrolase activities were expressed. Reverse transcription-polymerase chain reaction revealed that the transcript occurred at high levels in liver and kidney but was hardly detectable in lung and heart from which large form lysophospholipases had been purified, suggesting the presence of multiple forms of large form lysophospholipase in mammalian tissues.

L8 ANSWER 30 OF 37 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:640337 CAPLUS
DOCUMENT NUMBER: 127:316270
TITLE: **Cloning** of cDNA for and characterization of protein exhibiting **phospholipase B**

, lysophospholipase, and lipase activities from rat
INVENTOR(S): Tojo, Hiromasa; Hasegawa, Akira
PATENT ASSIGNEE(S): Tojo, Hiromasa, Japan; Tonen Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09248190	A2	19970922	JP 1996-86022	19960315

AB A cDNA sequence encoding a novel protein exhibiting all of phospholipase B, lysophospholipase, and lipase activities is isolated from a cDNA library of rat small intestine brush border membrane. The protein is comprised of 1450 amino acids characterized as (1) 1-Met.apprx.30-Gly the signal peptide; 1421-Leu.apprx.1443-Trp the membrane-binding domain; and 4 repetitive domains located in 43-Leu.apprx.1408-Asn. The phospholipase B, lysophospholipase, and lipase activities are located in the 2nd repeat domain (367-Lys.apprx.712-Asn). Expression of the cDNA in transgenic COS cells was shown. In vivo expression of the enzyme in rat organs was also examd. Prodn. of the enzyme in a transgenic host is claimed.

L8 ANSWER 31 OF 37 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:318388 CAPLUS
DOCUMENT NUMBER: 127:46959
TITLE: Cloning, expression, and catalytic mechanism of murine lysophospholipase I
AUTHOR(S): Wang, Aijun; Deems, Raymond A.; Dennis, Edward A.
CORPORATE SOURCE: Dept. Chemistry and Biochemistry, School of Med. and Revelle College, Univ. Calif. at San Diego, La Jolla, CA, 92093-0601, USA
SOURCE: J. Biol. Chem. (1997), 272(19), 12723-12729
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A lysophospholipase (LysoPLA I) has been purified and characterized from the mouse macrophage-like P388D1 cell line. This enzyme was now sequenced, cloned, and expressed in Escherichia coli cells. The enzyme contains 230 amino acid residues with a calcd. mol. mass of 24.7 kDa. It has a high helical content in its predicated secondary structure, which is also indicated in its CD spectrum. The cloned LysoPLA I was purified to homogeneity from the transformed E. coli cells by a gel filtration column and an ion exchange column. The specific activity of the purified protein is 1.47 .mu.mol/min.cntdot.mg toward 1-palmitoyl-sn-glycero-3-phosphorylcholine at pH 8.0 and 40.degree., corresponding to the reported value of 1.3-1.7 .mu.mol/min.cntdot.mg for the protein purified from the P388D1 cells. In addn., the cloned protein cross-reacted with an antibody raised against LysoPLA I also purified from the P388D1 cells. The deduced LysoPLA I sequence contains a well conserved GXSXG motif found in the active site of many serine enzyme, and the activity of the LysoPLAI was irreversibly inhibited by the classical serine protease inhibitor diisopropyl fluorophosphate. Furthermore, site-directed mutagenesis was employed to change Ser-119 in the GXSXG motif to an Ala. The resulting mutant protein lost all of its lysophospholipase activity, even though it had the same overall protein conformation as that of the wild-type LysoPLA

1. Therefore, LysoPLA I has been demonstrated to be a serine enzyme with Ser-119 at the active site.

L8 ANSWER 32 OF 37 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:187399 CAPLUS
DOCUMENT NUMBER: 126:259887
TITLE: The genomic structure of the human Charcot-Leyden crystal protein gene is analogous to those of the galectin genes
AUTHOR(S): Dyer, Kimberly D.; Handen, Jeffrey S.; Rosenberg, Helene F.
CORPORATE SOURCE: Lab. Host Defenses, Natl. Inst. Health, Bethesda, MD, 20892, USA
SOURCE: Genomics (1997), 40(2), 217-221
CODEN: GNMCEP; ISSN: 0888-7543
PUBLISHER: Academic
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The Charcot-Leyden crystal (CLC) protein, or eosinophil lysophospholipase, is a characteristic protein of human eosinophils and basophils; recent work has demonstrated that the CLC protein is both structurally and functionally related to the galectin family of .beta.-galactoside binding proteins. The galectins as a group share a no. of features in common, including a linear ligand binding site encoded on a single exon. In this work, we demonstrate that the intron-exon structure of the gene encoding CLC is analogous to those encoding the galectins. The coding sequence of the CLC gene is divided into four exons, with the entire .beta.-galactoside binding site encoded by exon III. We have isolated CLC .beta.-galactoside binding sites from both orangutan (Pongo pygmaeus) and murine (Mus musculus) genomic DNAs, both encoded on single exons, and noted conservation of the amino acids shown to interact directly with the .beta.-galactoside ligand. The most likely interpretation of these results suggests the occurrence of one or more exon duplication and insertion events, resulting in the distribution of this lectin domain to CLC as well as to the multiple galectin genes.

L8 ANSWER 33 OF 37 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1996:295556 CAPLUS
DOCUMENT NUMBER: 124:336022
TITLE: Eosinophil Charcot-Leyden crystal protein binds to beta-galactoside sugars
AUTHOR(S): Dyer, Kimberly D.; Rosenberg, Helene F.
CORPORATE SOURCE: Laboratory Host Defenses, National Institutes Health, Bethesda, MD, 20892, USA
SOURCE: Life Sci. (1996), 58(23), 2073-2082
CODEN: LIFSAK; ISSN: 0024-3205
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The Charcot-Leyden crystal protein (CLC) found in human eosinophils and basophils has 43-48% amino acid sequence similarity to the galectin family of beta-galactoside binding proteins. We show here that enzymically active recombinant CLC binds to a lactose-conjugated agarose resin, and that binding is inhibited in a dose dependent fashion by both lactose (IC50 = 41 mM) and fucose (IC50 = 380 mM), but not by arabinose. These results demonstrate that CLC has functional as well as structural homol. to the galectins, and suggest that CLC may also participate, as do the galectins, in mediating cell-cell and cell-matrix interactions, and in activating the cellular immune response.

L8 ANSWER 34 OF 37 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1996:198749 CAPLUS
DOCUMENT NUMBER: 124:310870
TITLE: Purification, cDNA cloning, and regulation of

lysophospholipase from rat liver

AUTHOR(S): Sugimoto, Hiryuki; Hayashi, Hiroaki; Yamashita, Satoshi

CORPORATE SOURCE: Dep. Biochemistry, Gunma Univ. Sch. Med., Maebashi, 371, Japan

SOURCE: J. Biol. Chem. (1996), 271(13), 7705-11
CODEN: JBCHA3; ISSN: 0021-9258

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A lysophospholipase was purified 506-fold from rat liver supernatant. The prepn. gave a single 24-kDa protein band on SDS-PAGE. The enzyme hydrolyzed lysophosphatidylcholine, lysophosphatidylethanolamine, lysophosphatidylinositol, lysophosphatidylserine, and 1-oleoyl-2-acetyl-sn-glycero-3-phosphocholine at pH 6-8. The purified enzyme was used for the prepn. of antibody and peptide sequencing. A cDNA clone was isolated by screening a rat liver .lambda.gt11 cDNA library with the antibody, followed by the selection of further extended clones from a .lambda.gt10 library. The isolated cDNA was 2362 bp in length and contained an open reading frame encoding 230 amino acids with a Mr of 24,708. The peptide sequences detd. were found in the reading frame. When the cDNA was expressed in Escherichia coli cells as the .beta.-galactosidase fusion, lysophosphatidylcholine-hydrolyzing activity was markedly increased. The deduced amino acid sequence showed significant similarity to Pseudomonas fluorescens esterase A and Spirulina platensis esterase. The 3 sequences contained the GXSXG consensus at similar positions. The transcript was found in various tissues with the following order of abundance: spleen, heart, kidney, brain, lung, stomach, and testis = liver. In contrast, the enzyme protein was abundant in the following order: testis, liver, kidney, heart, stomach, lung, brain, and spleen. Thus, the mRNA abundance disagreed with the level of the enzyme protein in liver, testis, and spleen. When HL-60 cells were induced to differentiate into granulocytes with DMSO, the 24-kDa lysophospholipase protein increased significantly, but the mRNA abundance remained essentially unchanged. Thus, a posttranscriptional control mechanism is present for the regulation of 24-kDa lysophospholipase.

L8 ANSWER 35 OF 37 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1994:1875 CAPLUS

DOCUMENT NUMBER: 120:1875

TITLE: Human eosinophil Charcot-Leyden crystal protein: cloning and characterization of a lysophospholipase gene promoter

AUTHOR(S): Gomolin, Hilary I.; Yamaguchi, Yuji; Paulpillai, Angela V.; Dvorak, Laura A.; Ackerman, Steven J.; Tenen, Daniel G.

CORPORATE SOURCE: Dep. Med., Beth Israel Hosp., Boston, MA, 02215, USA

SOURCE: Blood (1993), 82(6), 1868-74
CODEN: BLOOAW; ISSN: 0006-4971

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The Charcot-Leyden crystal (CLC) protein is a lysophospholipase expressed exclusively by eosinophils and basophils. During eosinophilic differentiation of eosinophil-committed cell lines, CLC steady state mRNA levels increased significantly. This increased expression is transcriptionally regulated during butyrate induction of an eosinophilic subline (C15) of the promyelocytic leukemia cell line HL-60, as shown by nuclear run-on assays. The transcriptional start site of the CLC gene was identified 43 bp upstream of the 5' end of the longest available cDNA sequence. The gene encoding CLC protein was cloned from a chromosome 19-specific library and a fragment overlapping the transcriptional start site was isolated and sequenced. Plasmid constructs (in the pXP2

luciferase expression vector) contg. 411 and 292 bp of genomic sequence upstream of the CLC transcriptional start site directed reporter gene expression in transient transfections of HL-60-C15 cells, as well as other myeloid (U937) and nonmyeloid (HeLa and RPMI 8402) cell lines. However, the differential expression of the two CLC promoter constructs in these cell lines suggests that the -292 to -411 bp region of the promoter may confer some specificity for expression in the eosinophil lineage. The CLC promoter sequence contains two consensus GATA binding sites, a purine-rich sequence that presents potential binding sites for PU.1, a member of the ets family of genes, as well as sequences described in other myeloid-specific promoters. This is the first demonstration of a functional eosinophil promoter that could serve as a model for identifying DNA elements and trans-activating factors that regulate gene expression during the commitment and differentiation of the eosinophil lineage.

L8 ANSWER 36 OF 37 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1993:228506 CAPLUS
DOCUMENT NUMBER: 118:228506
TITLE: Molecular cloning and characterization of human eosinophil Charcot-Leyden crystal protein (lysophospholipase). Similarities to IgE binding proteins and the S-type animal lectin superfamily
AUTHOR(S): Ackerman, Steven J.; Corrette, Stephanie E.; Rosenberg, Helene F.; Bennett, Joshua C.; Mastrianni, David M.; Nicholson-Weller, Anne; Weller, Peter F.; Chin, David T.; Tenen, Daniel G.
CORPORATE SOURCE: Dep. Med., Beth Israel Hosp., Boston, MA, 02215, USA
SOURCE: J. Immunol. (1993), 150(2), 456-68
CODEN: JOIMA3; ISSN: 0022-1767
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The authors have isolated and sequenced a 598-bp full length cDNA clone for the human Charcot-Leyden crystal (CLC) protein (eosinophil lysophospholipase), the unique and prominent constituent of human eosinophils and basophils that forms the hexagonal bipyramidal crystals classically obsd. in tissues and secretions from sites of eosinophil-assocd. inflammation. A 426-bp open reading frame encoded a 142-amino acid polypeptide with a predicted mol. mass of 16.5 kDa and isoelec. point of 7.28. The deduced amino acid sequence of CLC protein showed 20 to 30% similarity over regions of .apprx.100 amino acids with the carboxyl-terminal domains of four IgE-binding proteins, including the 31-kDa human and rat IgE-binding proteins, the 35-kDa mouse carbohydrate binding protein (CBP35), Mac-2, the murine macrophage cell surface protein that is identical to CBP35, and the human homolog of Mac-2. These proteins are members of a superfamily of .beta.-galactoside binding S-type animal lectins, which includes a group of highly conserved 14-kDa lectins isolated from human lung, heart, placenta, bovine heart, chicken skin, mouse fibroblasts, and the elec. organ of the elec. eel; CLC protein also showed sequence similarities to these 14-kDa animal lectins, including conservation of 7 to 16 invariant amino acid residues thought to comprise the carbohydrate-binding domain of these proteins, with conservative amino acid changes at others; thus, CLC protein could potentially possess carbohydrate or IgE-binding activities. Northern analyses revealed an .apprx.900-bp mRNA species that was present in peripheral blood eosinophils from patients with eosinophilia, basophils from patients with chronic myelogenous leukemia, and in HL-60 cells induced towards eosinophilic differentiation with B cell growth factor-II (IL-5) or granulocytic differentiation with DMSO, but was absent in neutrophils, monocytes, T cells, B cells, or HL-60 cells induced towards monocytic

differentiation with vitamin D3. Southern analyses revealed a gene of .apprx.5 to 6 kb in length. The cDNA clone and complete amino acid sequence data for CLC protein will facilitate structure-function anal. of its unusual hydrophobic properties, unique propensity for crystn., lysophospholipase, and potential lectin-like activities.

L8 ANSWER 37 OF 37 BIOTECHDS COPYRIGHT 2001 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1996-01386 BIOTECHDS
TITLE: Isolated polynucleotide encoding cytosolic phospholipase-A2/B
;

CHO cell culture protein sequence and DNA sequence, for use in phospholipase-inhibitor isolation
AUTHOR: Jones S; Tang J
PATENT ASSIGNEE: Genet.Inst.Cambridge-Massachusetts
LOCATION: Cambridge, MA, USA.
PATENT INFO: US 5466595 14 Nov 1995
APPLICATION INFO: US 1994-281193 27 Jul 1994
PRIORITY INFO: US 1994-281193 27 Jul 1994
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 1996-009526 [01]
AN 1996-01386 BIOTECHDS
AB A new DNA sequence encodes a specified protein sequence, or a stringently
hybridizing or allelic variant sequence. The DNA may be inserted in a vector for expression in a host cell, with expression control sequences. The DNA encodes a calcium-independent cytosolic phospholipase-A2/B purified from CHO cell culture cytosol, which may be used in screening for phospholipase-inhibitor and antiinflammatory agents. These agents may
be used in therapy of rheumatoid arthritis, psoriasis, asthma, inflammatory bowel disease, and other diseases mediated by increased levels of prostaglandins, leukotriene or platelet activating factor. The
enzyme may also be used for production of antibodies for use as research or diagnostic tools. In an example, RNA was prepared from CHO-DUX cells and used to prepare cDNA. The cDNA was ligated into a predigested phage lambda-ZAPII-EcoRI vector and packaged into phage particles. The cDNA library was screened using an oligonucleotide DNA probe set based on peptide sequences of phospholipase-A2 (EC-3.1.1.4) and
phospholipase-B (EC-3.1.1.5). (24pp)

=> d his

(FILE 'HOME' ENTERED AT 12:51:56 ON 02 MAR 2001)

FILE 'EMBASE, MEDLINE, BIOSIS, BIOTECHDS, SCISEARCH, CAPLUS' ENTERED AT 12:52:53 ON 02 MAR 2001

FILE 'AGRICOLA' ENTERED AT 12:53:22 ON 02 MAR 2001
L1 0 S PHOPHOLIPASE B
L2 44 S PHOSPHOLIPASE B
L3 0 S L2 AND ASPERGILLUS

FILE 'EMBASE, BIOSIS, SCISEARCH, CAPLUS, MEDLINE, BIOTECHDS, AGRICOLA' ENTERED AT 13:06:42 ON 02 MAR 2001
L4 961 S PHOSPHOLIPASE B
L5 23 S L4 AND ASPERGILLUS
L6 427 DUP REM L4 (534 DUPLICATES REMOVED)
L7 12 DUP REM L5 (11 DUPLICATES REMOVED)
L8 37 S L6 (P) CLON?

=> dup rem l8

PROCESSING COMPLETED FOR L8
L9 37 DUP REM L8 (0 DUPLICATES REMOVED)